

THE CONTRIBUTION OF THE RECOVERY SELF ASSESSMENT TO THE
MEASUREMENT OF ILLNESS MANAGEMENT AND RECOVERY

By

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TABLE OF CONTENTS

LIST OF FIGURES	5
LIST OF TABLES.....	6
ACKNOWLEDGMENTS.....	7
ABSTRACT.....	8
CHAPTER 1. INTRODUCTION.....	9
Recovery Defined.....	9
Measurement of Recovery.....	14
Purpose.....	19
Statement of the Problem.....	22
Research Questions.....	23
Significance of the Study.....	24
Summary.....	25
Definitions of Key Terms and Acronyms.....	27
CHAPTER 2. LITERATURE REVIEW.....	31
Recovery.....	32
Measurement of Recovery.....	33
Recovery Self Assessment-Revised (RSA-R).....	34
Making Decisions-Empowerment Scale (MDE).....	36
Illness Management and Recovery Client Self-rating (IMR).....	37
Sense of Community Index-2 (SCI-2).....	40
Consumer Satisfaction Survey (CSS).....	41
Rosenberg Self-Esteem Scale (RES).....	41
Employment.....	44
Housing.....	45
Education.....	46
Psychiatric Hospitalization Days.....	48
Programs.....	49
Community Alcohol and Drug Treatment Programs.....	49
Integrated Services.....	50
Clubhouses.....	51
Residential Care Facilities for Persons with Mental Illness (RCF- PMI).....	52
Outpatient Programs.....	53
Summary.....	54

CHAPTER 3. RESEARCH METHODOLOGY.....	56
General Research Strategy and Design.....	56
Participants.....	57
Data Collection Procedures.....	62
Data Analysis.....	63
Research Question #1.....	64
Research Question #2.....	64
Research Questions #3 & #4.....	65
Research Question #5.....	66
Instruments and Measures.....	67
The Connecticut Consumer Satisfaction Survey (CSS).....	68
The Making Decisions-Empowerment Scale (MDE).....	68
The Illness Management and Recovery Client self-rating (IMR).....	69
Sense of Community Index-2 (SCI-2).....	70
Recovery Self-Assessment-Revised (RSA-R).....	71
Rosenberg Self-Esteem Scale RES).....	72
Summary.....	73
CHAPTER 4. RESULTS.....	76
Research Question 1.....	77
Research Question 2.....	78
Research Question 3.....	79
Research Question 4.....	81
Research Question 5.....	82
CHAPTER 5. DISCUSSION.....	95
Research Question 1.....	96
Research Question 2.....	98
Research Question 3.....	104
Research Question 4.....	106
Research Question 5.....	108
Limitations of the Study.....	110
Implications and Future Research.....	111
REFERENCES.....	118
APPENDIX A. Consent to Participate in Research.....	140
APPENDIX B. Making Decisions Empowerment Scale.....	143
APPENDIX C. Sense of Community Index II	146
APPENDIX D. Department of Mental Health and Addiction Services DMHAS Consumer Survey FY 2008.....	149
APPENDIX E. Illness Management and Recovery (IMR) Scales–Client Self-rating	151

APPENDIX F. RSA-R Person in Recovery Version.....	154
APPENDIX G. Rosenberg Self-Esteem Scale.....	156

LIST OF FIGURES

Figure 2.1 Hypothesized Relationship of the Recovery Measures Used in this Study.....	43
Figure 5.1 The Relationship of the Significant Variables.....	99
Figure 5.2 Representation of the New Theoretical Relationship of the RSA-R, the IMR, and the RES.....	102

LIST OF TABLES

Table 3.1 Participants according to Agency, Program.....	59
Table 3.2 General Type of Service Category.....	59
Table 3.3 Age Ranges and Frequencies.....	60
Table 3.4 Distribution by Race.....	61
Table 3.5 Length of Service	61
Table 4.1 Means, Standard Deviation, and T-Test of Males and Females on Five Measures.....	78
Table 4.2 Correlations among Five Recovery Measures.....	79
Table 4.3 Mean and Standard Deviations on the Dependent Variables for General Services.....	80
Table 4.4 Frequency Distributions of Age, Race, and Length of Services.....	81
Table 4.5 Correlations among Continuous Variables.....	83
Table 4.6 Results of the Multiple Regression Analysis.....	83
Table 4.7 Model Summary of Hierarchical Multiple Regression.....	84
Table 4.8 Results of the Second Multiple Regression Analysis.....	86
Table 4.9 Model Summary of the Second Hierarchical Multiple Regression.....	87
Table 4.10 Results of the Third Multiple Regression Analysis.....	89
Table 4.11 Model Summary of the Third Hierarchical Multiple Regression.....	90
Table 4.12 Results of the Fourth Multiple Regression Analysis.....	91
Table 4.13 Model Summary of the Fourth Hierarchical Multiple Regression.....	92

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ABSTRACT

Variables contributing to recovery from mental illness and substance abuse were investigated. These variables included empowerment, sense of community, illness management, self-esteem, self-determination, and the variables of agency, program, gender, age, general type of service, race, and length of service. The study was entirely from the person in recovery perspective, emphasizing self-determination. Participants came from agencies and were currently in recovery programs. The five measures were the Making Decisions – Empowerment Scale (MDE), the Illness Management and Recovery Client Self-rating (IMR), the Sense of Community Index-2 (SCI-2), the Rosenberg Self-Esteem Scale (RES), and the Recovery Self Assessment-Revised (RSA-R). Significant correlations existed between the IMR, the RES, and the RSA-R, but not between the RES and the RSA-R. None of the other variables proved significant in predicting any of the measures. The IMR Client Self-rating served as the dependent variable in a hierarchical multiple regression. Once again, the RES and the RSA-R were the only significant predictors of the IMR. Other hierarchical multiple regressions with the RES and the RSA-R as the dependent variable supported a new theory of recovery. Implications for assessment conclude the discussion of these results. In general, the RSA-R proved itself a valuable measure of recovery in the sample.

CHAPTER 1

INTRODUCTION

The purpose of counseling, therapy, and mental health programs is to provide effective services to clients to reach their full potential. The focus of this study was to investigate various factors that associate with the recovery of individuals with mental disorders and substance abuse. Specifically, the study investigated the impact of empowerment, sense of community, illness management, self-esteem, and self-determination with the use of five measures of recovery: The Making Decisions-Empowerment Scale (MDE), the Sense of Community Index-2 (SCI-2), the Illness Management and Recovery Client Self-rating (IMR), the Rosenberg Self-Esteem Scale (RES), and the Recovery Self Assessment-Revised (RSA-R). The Cronbach's alpha for this study was .84. In addition to the measures, seven variables were studied also: agency, program, gender, age, general type of service, race, and length of service, for their effects on recovery from mental disorder and substance abuse.

Recovery Defined

The word recovery is derived from the Latin verb "*recipere*," meaning, "To take back, retake, to get back, regain, rescue," and from "*recuperare*," meaning, 'to get back, recover, recapture' (*Latin Concise Dictionary*, 2003, p. 182). "Recovery," the noun, comes from the verb "to recover." It means, "1. to get back; regain 2. a. to bring back to normal position or condition. b. to rescue 3. a. to make up for b. to gain by legal processes 4. (archaic) reach 5. to find or identify again (Webster's Ninth New College

Dictionary, 1991, p. 985). Recovery has become the key word in mental health and substance abuse treatment (Walker, 2006; Onken, Craig, Ridgeway, Ralph, & Cook, 2007; Davidson, O'Connell, Tondora, Lawless, & Evans, 2005).

The term recovery was first used in the substance abuse area. When the Alcoholics Anonymous (AA) model emerged in the 1920's and 30's, it emphasized an illness perspective on alcoholism rather than a moral, character indictment (Kelly, Magill, & Stout, 2009). AA first published the term in 1939. Recovery, like with any other illness, was used to describe the goal of change and treatment. The book, *Alcoholics Anonymous* (1939, 2013), usually referred to in Alcoholic Anonymous (AA) circles as the "Big Book," named recovery as the treatment outcome and objective in the stories of 42 persons who prevailed over alcoholism (AA, 2013). The AA model has demonstrated effectiveness, and at minimum level, comparably as beneficial as other addiction therapy models (Kelly, Magill, & Stout, 2009). The Big Book itself is the most widely published book in the world today (Kelly, Magill, & Stout, 2009). There is now a non-12-step alternative to AA. This treatment plan is called SMART (Self-Management and Recovery Training, 2013). SMART is a self-help program begun in 1994 with roots in other secular and rational (as opposed to spiritual) predecessors. Treatment consists of four elements: 1. Motivational supports 2. Urge cessation 3. Self-management of behaviors, cognitions, and emotions 4. Finding a balanced approach (SMART, 2013). The SMART program emphasizes recovery and it has been demonstrated positive treatment outcomes since 2008 (SMART, 2013). SMART program was recognized in the treatment field as a valid alternative to the AA model (Kelly, Magill, & Stout, 2009).

In the mental health field, the term recovery began to appear shortly after the AA model brought the term to-the-fore. In the mental health field, the term recovery indicated a lack of symptoms (American Psychiatric Association, 2000). Initially, substance abuse treatment defined recovery as a cessation of substance use, focusing exclusively on substance abuse abatement independent of chronic mental illness. For example, participants in AA were advised that they first must end substance abuse to determine what underlies it (AA, 2013). Concomitantly, those with mental illness often had substance abuse issues deemed as simply secondary attempts at self-medication (SAMHSA, 1997). The distinction between the two treatments, substance abuse and mental health, began to disappear slowly. Furthermore, the two disorders, mental illness and substance abuse, find an inextricable relationship. The National Comorbidity Study “estimated that 51% of those with a lifetime of mental disorders also had a lifetime of substance dependence and that 41%-61% percent of those with a lifetime of substance dependence had a lifetime of mental disorders” (Cloud & Granfeld, 2008).

Relational complications exist between mental disorder and substance abuse. Dual diagnosis refers to the experience of mental disorder and substance abuse in the same person. It is also referred to as co-occurring disorders. The relationship between mental disorder and substance abuse becomes akin to the “chicken-or-the-egg” argument. In other words, what came first, the substance abuse, which then produced a mental illness, or the mental illness that sought relief through substance abuse (SAMSHA, 1997)? Another important question regards recovery itself, whether or not we are referring to mental disorder or substance abuse. Which is the correct terminology, recovering, in recovery, or recovered? Recovering implies an on-going and never-ending

process. In recovery suggests that individuals are in a state of existence from which they may or may not graduate. Recovered means that the person once had a problem but now is cured. Some point to the fact that full recovery is very possible; making the term recovered a viable option (Doukas & Cullen, 2009).

In addition to what term to use to define the recovery process, historically there were discussions on the definition of recovery, as well. In general, mental health and substance abuse professionals use the concept of recovery differently. Dukas and Cullen (2009, p. 393) proposed that “for more than three decades the literature has applied the term ‘recovered’ to describe people who have overcome their addiction.” Still others maintained that the addiction recovery movement was a more recent phenomenon (Krentzman, 2013). In this vein, addiction recovery was best described as a social movement with a political agenda (Krentzman, 2013).

Low (1957) applied the term recovery to mental health treatment first. Later, Chamberlain (1978) and Gartner and Reisman (1984) broadened the applicability for mental health. However, it was not until the late 1980’s (e.g., Deegen, 1988; Leete, 1989) and throughout the 1990’s (e.g., Fisher, 1992; Spaniol, Keohler, & Hutchison, 1994; Beale & Lambric, 1995) that recovery became a common word in the delivery of mental health services. Recovery became the topical commonality of the 1990’s research (Anthony, 1993).

Today, both the substance abuse and mental health treatment fields commonly use the term recovery (Walker, Emmens, & Simpson, 2012). Various definitions of recovery from mental illness have emerged (Onken, Craig, Ridgway, Ralph, & Cook, 2007; Davidson, O’Connell, Tondora, Lawless, & Evans, 2009). Recovery emphasizes new

meaning and purpose (Anthony, 1993; Onken, Dumont, Ridgway, Dornan, & Ralph, 2002). Recovery focuses on the overcoming of challenges (Deegan, 1988, 1996; Crowley, 2000) highlights empowerment (Spaniol, Koehler, & Hutchinson, 1994; Rogers, Chamberlain, Ellison, & Crean, 1997) and self-determination (Tower, 1994). Recovery also involves assuaging symptoms and a repetition of previous success exhibited before those symptoms (Jacobson & Greenley, 2001). Other measurable outcomes of recovery include hospitalization, medication use, housing, and employment, as well (Jacobson & Curtis, 2000; Schwartz, McCoy & Smith, 2012). Hope can motivate recovery (Andreasen, Oades, & Caputi, 2003). Krentzman (2013) supported the idea that with the rise of positive psychology the tools and science of recovery came to the fore.

The most recent definition gaining the widest acceptance is recovery as self-determination, as opposed to adherence to prescribed treatments by professionals (Davidson, O'Connell, Tondora, Lawless, & Evans 2009; Corrigan, et al., 2012). Self-determination means that the person in recovery makes the decisions regarding treatment, care, and services. This definition continues and combines the themes of empowerment (Spaniol & Koehler, 1994), self-determination (Tower, 1994), and hope (Andreasen, Odes, & Caputi, 2003). Individuals in recovery served by the local agencies and programs in this study, each make an Empowerment Plan. In this Empowerment Plan, they set personal goals for the coming year (Schwartz, McCoy & Smith, 2012). This choice of goals exhibits self-determination and the agency staff helps and supports the persons in recovery accomplish and make progress toward these goals. In this study, self-determination promoting recovery was an essential component of the recovery definition. A number of universities have joined to form the online Center on Adherence

and Self-Determination. These university members are Yale, Rutgers, Temple, Wisconsin, NYU, Dartmouth Medical School, and the University of Illinois at Chicago. The Center collaborated with community entities, such as the National Association for the Mentally Ill and National Institute on Mental Health, to promote and research the recovery value and outcome of self-determination (Center for Adherence and Self-determination, 2013). Since self-determination puts the major responsibility on the person in recovery to make choices, these choices then become emblematic of the recovery sought (Corrigan, Larson, & Rusch, 2009). The role of professionals is to aid in the decision-making process.

Davidson, O'Connell, Tondora, Lawless, & Evans (2009) have raised an important issue regarding the significance of utilizing self-determination as the key measure of the recovery concept. The definition of recovery must involve some sort of conceptual uniformity such as recovery as self-determination. Otherwise, without scientific agreement across the field of treatment, true recovery outcomes will simply be a matter of opinion, or worse, the opinion of others, such as professionals, rather than the person in recovery. Measuring outcomes with scientifically valid instruments can help avoid this negative possibility.

Measurement of Recovery

The Substance Abuse and Mental Health Services Administration (SAMHSA, 2013) functions under the US Department of Health and Human Services, mandated to promote and measure recovery. SAMHSA provides criteria for effective evidence-based practices (EBP) for treating individual adults with chronic mental illness and, as are often the case, the co-morbid problem of substance abuse. Evidenced-based practices are those

recognized by SAMHSA has having scientific and statistical support as bona fide treatment approaches. As many approaches vie for the SAMHSA imprimatur of evidence-based, SAMHSA publishes and sets criteria for meeting the evidence-based threshold.

These approaches constitute the SAMHSA recognized following treatments as evidence based for individuals with chronic mental illness and substance abuse. The SAMHSA EBP endorsements span different treatment settings and run the gamut of treatment issues. SAMHSA identifies the EBP and treatments for individual adults with chronic mental illness and substance abuse as

Assertive Community Treatment (ACT)

Integrated Treatment of Co-Occurring Substance Abuse and Mental Health

Disorders (ISA)

Supported Employment (SE)

Family Psycho-education

Illness Management and Recovery (IMR) (Iowa Consortium for Mental Health, 2013).

In the mental health field, the goal is to utilize an evidence-based practice (EBP). SAMHSA becomes the “gold standard” for mental health and substance abuse EBP. Although, some object that EBP gives rise to a false uniformity in the treatment field, where, as Marshall McLuhan coined, “the medium has become the message” (Lakeman, 2008).

Even given the objections to SAMHSA procedures and policies and potential flaws, SAMHSA serves the public by proffering treatment uniformity. As previously

noted, SAMHSA lists the five treatments programs as evidence-based (EBP). Each one of them has demonstrated effectiveness over time as seen in studies with those in recovery: Integrated Service Agency programs (ISA) (Biegel, Kola, & Ronis, 2007), Assertive Community Treatment (ACT) (Smith, Jennings, Cimino, 2010), Illness, Management and Recovery (IMR) (Bartholomew & Kensler, 2010), Family Psycho-education (Nasr & Kausar, 2009), and Supported Employment (SE) (Bond, et al, 2007).

As well as endorsing certain EBP for individuals, SAMHSA provides evaluative tools to measure individual recovery. These tools include measures that are appropriate for individuals per se and their experience of EBP across different treatment settings. SAMHSA recommends measures, such as “the Illness Management and Recovery (IMR) Scales (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004)”, “the Ohio Mental Health Consumer Outcomes System (Ohio Department of Mental Health Office of Program Evaluation and Research, 2004)”, and “the Recovery Assessment Scale (RAS) (Giffort, Schmook, Woody, Vollendorf, & Gervain, 1999)” (Campbell-Orde, Chamberlin, Carpenter, & Leff, 2005, p. 8).

Coupled with the evaluative tools for individuals, SAMHSA provides evaluative tools to measure the recovery environments. These tools include measures that are appropriate for organizational environments. The SAMHSA endorsed measures of recovery environments include “the Recovery Enhancing Environment Measure (REE) (Ridgway, (2004)”, “the Recovery Oriented Systems Indicators Measure (ROSI) (Dumont, Ridgway, Onken, Dornan, & Ralph, 2005)”, and “the Recovery Self Assessment (RSA) (O’Connell, Tondora, Croog, Evans, & Davidson, (2005)” (Campbell-

Orde, Chamberlin, Carpenter, & Leff, 2005, p. 8). The RSA-R was featured as one of the measures in this study.

In this study, five measures that focus on different aspects of recovery were used. The focus of this study was to investigate the relationship of these measures along with other variables affecting recovery. Specifically this study identifies what measures are best predicted by the agency, program, gender, age, general type of service, race, and length of service. The RSA-R was the primary measure of interest because it measures self-determination.

The Making Decisions-Empowerment Scale (MDE) (Sciarappa & Rogers, 1991) measured empowerment, registering how freely the person in recovery believed choices were made. The IMR Client Self-rating (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004) measured illness management and encapsulated the overall sense of recovery from the person in recovery point of view regarding the alleviation of specific symptoms and use of specific supports. This instrument score functioned as the dependent variable. The Sense of Community Index-2 (SCI-2) (Chavis, Lee, & Acosta, 2008) identified sense of community by how well the person in recovery believed relationships to others in the community fared. The Rosenberg Self-Esteem Scale (RES) (Rosenberg, 1965) used the key concept of self-esteem as the factor most instrumental in behavioral change and recovery. The Recovery Self Assessment-Revised measured self-determination and functioned as the measure of interest for this study. The RSA-R was the primary measure of interest because it measured self-determination.

The Recovery Self Assessment (RSA) (O'Connell, Tondora, Croog, Evans, & Davidson, 2005) originally had 36 items for each of its four versions: person in recovery,

family/significant other/advocate, provider, and administrator (Campbell-Orde, Chamberlin, Carpenter, & Leff, 2005). The scale showed internal consistency and reliability in prototype and carries no fee (Campbell-Orde, Chamberlin, Carpenter, & Leff, 2005). Comparing all these strengths and limitations, the RSA became the most research-friendly when compared to other SAMHSA endorsed measures.

Although the RSA is one of the measures listed in the SAMHSA environment category, it also offers a person in recovery version (O'Connell, Tondora, Croog, Evans, & Davidson, 2005). "The RSA is intended for use with individuals who receive and/or provide services in inpatient settings, outpatient settings, peer-run programs, residential programs, and social programs" (O'Connell, 2005, p. 93). The RSA functioned as the most parsimonious and apropos instrument to accomplish this assessment purpose. The RSA-R fit the purposes of this particular study. "The RSA is intended for use with programs/services for adults who have been diagnosed with a serious mental illness, dual diagnosis, or substance abuse," (O'Connell, 2005, p. 92). The authors redesigned the person in recovery version because the individual has little knowledge of agency policies and procedures. The original person in recovery version presumed this knowledge on a number of items.

The Recovery Self Assessment-Revised has four versions – CEO/agency director, provider, family/other/advocate, and person in recovery. The original RSA had 36 items in each version (O'Connell et al., 2005). The new versions include measures for the administrator, 36 items, the person in recovery, 32 items, the family/significant other/advocate, 40 items, and the provider version, 32 items (O'Connell, Tondora, Kidd, Stayner, Hawkins, & Davidson, 2007).

By investigating the relationship of the RSA-R and the IMR, this study also provided to the convergent validity of the RSA-R. Psychologists and educators often use the term, “construct,” which “means that the contents of the test derive from a plausible theory about what the nature of” the concept of concern actually is (Andreasen, 2006, p. 34). Very close in meaning to construct-related validity is the concept of consequential validity. Consequential validity emphasizes consequences in society for any construct (Fraenkel & Wallen, 2006). In this particular study, the construct-related validity would identify the utility of the Recovery Self Assessment-Revised to summarize the recovery itself from the person in recovery’s point of view. If the RSA-R was significantly correlated with the other measures of recovery, especially the IMR, it too would find substantiated incorporation into the recovery measurement fold. In this study, the RSA-R, along with the other measures, was used as a dependent variable to determine the predictive role of agency, program, gender, age, general type of service, race, and length of service. The RSA-R, along with all the other variables, was used to predict the IMR Client Self-rating score. Predicting the recovery, inherent in the Illness Management and Recovery Client Self-rating (IMR), provided overall predictive value. On the IMR scale, the subjects indicated such factors as goals, familial support, community involvement, self-help, medication compliance, alcohol and drug use, relapse, and psychiatric hospitalizations. The IMR-Client Self-rating score covered these variables and more. The IMR Client Self-rating score functioned as the criterion or dependent variable and the RSA-R was utilized to predict it.

Purpose

This study examined recovery of individuals from mental illness and substance abuse. This study was entirely from the person in recovery's perspective. This study operated from the self-determination theory focusing on personal assessment. The person in recovery was considered the expert in recovery as well as assessing personal recovery. This was a different model than the professional expert determining and describing the patient's recovery. The overarching goal of this study was to explore the individual variables that contribute to this self-assessed recovery. Specifically investigated were empowerment, sense of community, illness management, self-esteem, and self-determination. The Recovery Self Assessment-Revised (RSA-R), the Illness Management and Recovery Client Self-rating Scale (IMR), the Making Decisions Empowerment Scale (MDE), the Sense of Community Index-2 (SCI-2), the Rosenberg Self-Esteem Scale (RES) were used to measure these. Also included were the variables of agency, program, gender, age, general type of service, race, and length of service.

It is common for studies to focus on recovery from an agency or program perspective (Tikoo, 2005; Kirk, 2008). The Recovery Self-Assessment-Revised has versions that measure from this perspective: Administrator and Provider Versions, and the Family/Significant Other Version. However, studies exploring the person in recovery's own perspective are much rarer. The Recovery Self Assessment-Revised (RSA-R) also was developed to examine recovery strictly from the person in recovery's point of view with the Person in Recovery Version (O'Connell, Tondora, Kidd, Stayner, Hawkins, & Davidson, 2007). This study exclusively used the RSA-R Person in Recovery Version among the RSA-R options. In addition, this study sought to test the

RSA-R in real-life agency and program settings along with the other recognized recovery measures, again solely from the person in recovery point of view.

Along with the other measures in this study, the RSA-R was used as one of the dependent variables to uncover what agency, program, and general service type differences predict individual recovery. Demographic characteristics such as gender, age, race, and length of service reception were investigated with the use of these same measures as dependent variables. Finally, all the variables, including the measures of recovery, were used to predict the Illness Management and Recovery Client Self-rating. This study evaluated agency and program effectiveness from the person in recovery's point of view, and only from this point of view. This study sought to meet the challenge of measuring recovery, as with any other psychological construct, "in a convincing way" (Andreasen, 2006, p. 35). The RSA-R measured recovery from the person most invested in this assessment, the person in recovery.

The purpose of this study was to explore what individual factors contributed to recovery. In order to investigate possible treatment and agency differences in recovery the data was collected from the following agency types: a community treatment center, a governmental hospital, a private nonprofit community mental health center, a clubhouse, and other private and youth psychiatric services. Each of these agency settings was compared. The different agency settings included varied according to program type. This study compared these five recovery treatment programs: community substance abuse treatment, Integrated Service Agencies (ISA), clubhouses, Intensive Outpatient Programs (IOP) and/or Intensive Psychiatric Rehabilitation (IPR), and residential care facilities for persons with mental illness living circumstances (RCF-PMI). The

differences among the five agency settings and the five program types were investigated. How well they and the other demographic variables predicted scores on the five measures was determined. All of the variables were utilized to predict the IMR Client Self-rating.

Statement of the Problem

This study was initiated to identify the contributing variables of recovery. Often the subjects of recovery are split into those of mental health and those of substance abuse. This study co-joined them and studied both simultaneously. Just as often, experts or professionals determine recovery. This particular study evaluated recovery from a self-determination stance, from the person in recovery. This constituted the initial problem, the dearth of research that purposely combines all phases of recovery as analyzed by the person in recovery. More evidenced-based treatment analysis, examination of standard measures to compare programs, and checks on the effectiveness of those programs from the person in recovery's point of view are needed. In addition, common measurement carries weight because it provides uniform information across agencies and among individuals. All of the measures used in this study have a long history of use and an on-going role for this exact purpose.

All of the measures in this study were commonly used measures. This study was especially concerned with the RSA-R as a measure of self-determination. The RSA-R provider version was used to measure the recovery perspective of hospital workers (Salyers, Tsai, & Stulz, 2007). The RSA was identified as a strong candidate to measure recovery in Australian national recovery settings (Burgess, Pirkis, Coombs, & Rosen, 2010). The state of Connecticut used, and continues to use annually, the RSA to measure all of the mental illness and substance abuse services in the state. The Veterans

Administration uses the RSA today to measure its mental health and substance abuse treatment outcomes.

Thirty-five states and several countries use the RSA for evaluative purposes (Center for Adherence and Self-determination, 2013). The authors created the RSA via a participatory process wherein persons in recovery and their families helped craft the items. The RSA is brief, 10 minutes and self-administered. It is appropriate for use from large state-run systems down to smaller behavioral health care organizations. The RSA has good linkage to theory and face validity. The RSA shows strong factor consistency across its five domains as calculated by Cronbach's alpha.

Any US state could greatly benefit from the measures used in this study, including the RSA-R. In many states, there are RCF-PMI (Residential Care Facility for Persons with Mental Illness) facilities, Community Mental Health Centers, many with intensive outpatient services or intensive psychiatric rehabilitation programs, Integrated Service Agencies (ISA), clubhouses, and a wide-range of community substance abuse treatment centers. Common, statewide scales measuring the recovery and the recovery environments benefit overall treatment. The problem is that the recovery environment of RCF-PMI, community mental health centers, ISA, clubhouses, substance abuse treatment centers, all warrant measuring from the person in recovery point of view, first and foremost, and not in cursory fashion.

Research Questions

Specifically, the research questions in this study were:

1. Are there any gender differences that exist regarding a sense of recovery?

2. How does the Recovery Self Assessment-Revised (RSA-R) correlate with the other four measures, the Making Decisions-Empowerment Scale (MDE), the Sense of Community Index-2 (SCI-2), the IMR Client Self-rating (IMR), and the Rosenberg Self-Esteem Scale (RES)?
3. Is there any agency, program, or general category differences in recovery?
4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?
5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

In general, this proposed study attempted to answer the question of which recovery variables show effectiveness in promoting recovery. The RSA-R was the main measure of interest.

Significance of the Study

SAMHSA is indispensable in establishing a nationally recognized body of chronic mental illness and substance abuse treatment tools and approaches. SAMHSA designated these approaches and tools as evidenced-based (EBP). The EBP approaches are Assertive Community Treatment, Integrated Service Agencies, Supported Employment, Family Psycho-education, and Illness Management and Recovery.

There were a number of available EBP tools to measure recovery across treatment settings and approaches. These tools bifurcated into those measuring individual recovery and those measuring recovery environments. Earlier cited were those measuring individual recovery and those measuring recovery environments.

The Recovery Self Assessment (RSA) was one the instruments listed in those measuring recovery environments. However, the RSA also has an individual in recovery component. The redesigned version is the RSA-R. Its inventories include versions for agency director, family/significant other/advocate, provider, and person in recovery. The original RSA and the newer RSA-R provided the most comprehensive measurement scope when compared to the other SAMHSA endorsed measures, especially regarding self-determination.

This study used other recognized measures besides the RSA-R. These other measures involve empowerment, sense of community, illness management, and self-esteem. Therefore, this study is significant because it provided evidence of which variables best promote a self-perceived sense of recovery. It further evidenced the predictive value of the RSA-R. The authors of the RSA wrote,

In the future, research should be conducted to examine scores on the RSA in relation to other recovery-oriented constructs as quality of life, satisfaction with services, and empowerment to determine if persons in recovery receiving services at agencies that score higher on the RSA in fact have better individual outcomes” (O’Connell, 2005, p. 93).

This is what this study planned to accomplish as part of its *raison d’être*.

Summary

The purpose of this study is to compare variables in mental health and substance abuse recovery. In accomplishing this purpose, the study tested measures of empowerment, sense of community, illness management, self-esteem, and self-determination. The Recovery Self Assessment-Revised (O’Connell, et al., 2007) was the

main measure of interest and measured self-determination. Specifically, this study sought to test components of the RSA-R predictive value. “The face validity of the instrument is supported. Items were derived from extensive literature reviews and discussions with persons in recovery, mental health and addiction service providers, family members, and administrators. Quantitative indicators of validity are pending...” (O’Connell, 2005, p. 94).

This study proposed to identify the important recovery variables from the person in recovery point of view. This study tested the theory that the measurement of recovery involves empowerment, sense of community, illness management, and self-esteem. Especially of concern is whether the RSA-R was a valid instrument measuring what it purported to measure, the self-determined recovery of the individual. This study sought to meet the challenge of measuring recovery, as with any other psychological construct, “in a convincing way” (Andreasen, 2006, p. 35).

Correlating the RSA-R with the other well-established measures of individual recovery provided relationship description. The other measures used in this study were the Making Decisions-Empowerment Scale (Sciarappa & Rogers, 1991), the Sense of Community Index-2 (Chavis, Lee, & Acosta, 2008), the IMR Client Self-rating (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004), and the Self-Esteem Scale (Rosenberg, 1965). In addition, correlating the RSA-R with factors of recovery provided predictive value. The person in recovery assessed recovery per se by providing a personal assessment of illness management and recovery on the IMR Client Self-rating (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004). The IMR score functioned as the dependent variable in this study. The identified outcomes of goals, self-

help, hospitalizations, family support, and community involvement included in the IMR score are commonly used markers of personal and programmatic success (Schwartz, McCoy, & Smith, 2012). These outcomes on the IMR provide the statistical basis for predicting the success of recovery from the person in recovery. Scores on the RSA-R were correlated with the three other measures and used to predict the IMR scale.

This study utilized the RSA-R person in recovery version. The study included the RSA-R and the other four well-established measures of recovery listed as dependent variables to determine the predictive value of agency, program, gender, age, general type of service, race, and length of service. The entire list of variables, including the RSA-R, was used to predict the IMR Client Self-Rating score.

This study adds to the overall picture of recovery, as well as the quantitative investigative data description of the RSA-R. The purpose of the study was to examine which variables were most instrumental in producing recovery and to investigate the singular role of the RSA-R. The overriding question entailed which measures and other variables predict recovery from the person in recovery point of view.

Definition of Key Terms and Acronyms

Adherence: This occurs when mental health professionals measure recovery outcomes according to compliance with prescribed treatments. This is the older definition of recovery.

(AA) Alcoholics Anonymous: The peer-run organization for the treatment of alcoholism

(ACT) Assertive Community Treatment: This treatment practice was endorsed as evidenced-based. It is comprised of a team of treatment specialists, each with an area of

expertise. It most often involves the delivery of medications, small caseloads, daily staffing, and nursing and psychiatric, as well as employment services.

(CMI) Chronic Mental Illness: One of the terms in this study dealt with mental illness itself. Rather than enter the debate on whether mental maladies are an illness or a disorder, this study used the terms interchangeably. This practice has precedent (e.g., McNally, 2011, p. 30). The Diagnostic and Statistical Manual of Mental Disorders-IV TR (2000), the compendium recognized by practicing psychologists and psychiatrists as the evaluative guide, took this approach as well. For purposes of this study, chronic mental illness (CMI) was used. CMI usually involves the more severe mental disorders. These disorders are most commonly identified as schizophrenia, bipolar disorder, schizoaffective disorder, and major depression. Chronic Mental Illness and Non-chronic Mental Illness were official terms used in the state from where the sample was drawn. The basic difference was that those individuals with CMI have had more than one intensive psychiatric care episode and exhibited severe deficits in either occupational, financial, social, or personal care domains. “Individuals” always was the preferred referent and none was labeled by their illness, either generally or specifically. The popular “consumers” was avoided due to the economic nature of such nomenclature. The use of this term was too reductionistic for this study given that full recovery was the key concept of interest and not simply economic recovery.

(CSS) Connecticut Consumer Satisfaction Survey: A measure of mental health service satisfaction from the individual level and a self-assessment of recovery

(DSM-IV TR) Diagnostic and Statistical Manual of Mental Disorders, 4th Edition,

Revised: The book of recognized mental disorders as agreed upon and published by the

American Psychiatric Association. The DSM-V was published in May 2013 but was not referenced in this study because the parallel ICD-9 billing codes had not yet been aligned with it.

(EBP) Evidenced-based Practices: An empirically proven treatment approach as endorsed by SAMHSA

(IMR) Illness Management and Recovery: An SAMHSA-endorsed EBP treatment, complete with curriculum, client and clinician rating scales of recovery

(ISA) Integrated Service Agency: This treatment practice was endorsed as evidenced-based. It is comprised of a team of treatment specialists and generalists, some with areas of expertise. It most often involves the delivery of many services (transportation, employment, housing, medical and educational supports, etc.) for those individuals with co-occurring substance abuse issues and mental illness.

(MDE) Making Decisions-Empowerment Scale: A measure of recovery

(RCF-PMI) Residential Care Facility for Persons with Mental Illness: A residential living situation for persons with mental illness

(RSA) Recovery Self-Assessment: The original measure investigated in this study now redesigned as the RSA-R.

(SAMHSA) Substance Abuse and Mental Health Services Administration: An agency of the U.S. Department of Health and Human Services charged with the oversight of substance abuse and mental illness treatment, information, and materials.

Self-determination: This describes the measuring of recovery with improvements in decision-making and hope versus adherence. This is the newer model of recovery and the one emphasized in this study.

(SCI-2) Sense of Community Index-2: Build on the original SCI, the newest individual self-rating of community involvement and interaction

Strengths-based Perspective – This is the opposite of a barriers-based perspective and a synonym for Positive Behavior Supports. The provider focuses on the set of strengths and accomplishments that a person in recovery might have that would help reach goals. The principle tool is relationships with people (Appelstein, 2010; Pomerantz, 2009).

(SE) Supported Employment: A service provided by many agencies to find employment and assure job success for those individuals with CMI and substance abuse issues

CHAPTER 2

LITERATURE REVIEW

This study investigated the variables that contribute to recovery from mental illness and substance abuse. It was drawn entirely from the self-determination theory focusing on the person in recovery. The roles of empowerment, sense of community, illness management, self-esteem, self-determination, agency, program, general type of services, gender, age, race, length of services, on recovery were measured. The Making Decisions-Empowerment Scale (MDE) (Sciarappa & Rogers, 1991), the Sense of Community Index-2 (SCI-2) (Chavez, Lee, & Costa, 2008), the Illness, Management and Recovery Client Self-rating (IMR) (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004), the Rosenberg Self-Esteem Scale (RES) (Rosenberg, 1965) and the Recovery Self Assessment-Revised (RSA-R) were examined. The Cronbach's alpha for the measures was .84. As the Recovery Self Assessment-Revised measured the key concept of self-determination, it was the measure of focus.

Besides the RSA-R, the other four measures of recovery utilized highlighted an important component of recovery. The relationship of each to the others was explored. They were each used as dependent variables to assess the other variables of agency, program, general type of services, gender, age, race, and length of services. They each were used also as independent variables to predict the IMR score.

The Connecticut Consumer Satisfaction Survey (CSS) introductory section was used to gather demographic information. These important demographic variables were agency, program, gender, age, general service category, race, and length of service. This study also examined five agency settings: a community alcohol and drug treatment center, a government hospital, a clubhouse, a private community mental health center, and other miscellaneous agency settings. Within these agencies, the following five programs were investigated: alcohol and drug treatment, integrated services, clubhouse, residential, and outpatient programs.

Recovery

Recovery has been variously defined. Initially, it involved the cessation of symptoms or the use of a substance. Currently, both the treatment venues of substance abuse and mental health use the term recovery. It has come to represent the end goal of all treatment (Walker, Emmens, & Simpson, 2012). Recovery entails the search and procurement of a new purpose with a reconstituted meaning (Anthony, 1993; Onken, Dumont, Ridgway, Dornan, & Ralph, 2002). The recovered person overcomes challenges instead of being paralyzed by them (Deegan, 1988, 1996; Crowley, 2000). New personal power results from recovery, commonly referred to as empowerment (Spaniol, Koehler, & Hutchinson, 1994; Rogers, Chamberlain, Ellison, & Crean, 1997) or self-determination (Tower, 1994). The person in recovery exhibits less and less symptomatology, eventually returning to the level of functioning enjoyed before the recovery became necessary (Jacobson & Greenley, 2001). Agencies often seek measurable outcomes of recovery. These outcomes can be counted and compared. They often include such factors as education, hospitalizations, medication usage, housing, and

employment (Jacobson & Curtis, 2000; Schwartz, McCoy & Smith, 2012). Hope was cited as an essential feature of recovery (Andreasen, Oades, & Caputi, 2003). Positive emphases of all types constituted recovery in general (Krentzman, 2013).

Self-determination has become a prime factor in recovery (Davidson, O'Connell, Tondora, Lawless, & Evans, 2009; Corrigan, et al., 2009) which was the recovery perspective that was emphasized in this present study. This recovery definition included the previously identified themes of empowerment (Spaniol & Koehler, 1994), self-determination (Tower, 1994), and hope (Andreasen, Odes, & Caputi, 2003). The agencies and programs from which participants were elicited for this study each completed a yearly plan with their persons in recovery. These annual plans are called the Empowerment Plan. The person in recovery sets goals for the coming year as the foundation for this plan (Schwartz, McCoy & Smith, 2012). Although agencies and programs guide the formation of the Empowerment Plan, in the final analysis, the person in recovery formulated the goals. Self-determination thus formed the basis for the Empowerment Plan. The role of the agency or program then became assisting the person in recovery in the realization of these goals.

Measurement of Recovery

The US federal agency, the Substance Abuse and Mental Health Services Administration (SAMHSA), provides the oversight for the measurement of recovery. SAMHSA recommends measures to assess recovery (Campbell-Orde, Chamberlin, Carpenter, & Leff, 2005). This assessment includes measures for individuals, as well as recovery environments. Three of the five measures used in this study are SAMHSA recommended. These are the Making Decisions-Empowerment Scale, the Illness

Management and Recovery Client and Clinician versions, and the Recovery Self Assessment. The other two measures have longstanding usage support in research.

Recovery Self Assessment-Revised (RSA-R). The original RSA had 36 items for the person in recovery, CEO, family member, and provider (O'Connell, et al, 2005). It was recommended by SAMHSA as a possible evaluative instrument for the recovery environment (Campbell-Orde, et al., 2005). A study for the Australia was conducted to evaluate possible recovery measures for use in that country (Burgess, et al., 2010). This study examined 33 possible candidates, 22 for individuals and 11 for environments, on a number of criteria. For the recovery environment measurements, the criteria were:

Measures domains directly relevant to the recovery orientation of services;

Is manageable and easy to use in terms of administration (≤ 100 items);

Has undergone appropriate processes of development, piloting and documentation, and ideally been scientifically scrutinized;

Includes a consumer perspective;

Is applicable to the Australian context; and

Is acceptable to consumers (Burgess, et al., 2010, p. 4).

These criteria were hierarchical. In other words, if a measure failed to meet one of the earlier criteria it was not examined further. The authors (Burgess, et al., 2010) recommended the RSA as one of the recovery measures meeting the criteria, along with the Recovery Oriented Systems Indicators Measure (ROSI), Recovery Oriented Practices Index (ROPI), and the Recovery Promotion Fidelity Scale (RPFS) (Burgess, et al., 2010, p. 4).

Connecticut Department of Mental Health Addiction Services (DMHAS) (DMHAS, 2002) also conducted a significant study utilizing the RSA. This particular study researched the RSA with 122 individuals at 10 DMHAS funded agencies. They received 148 responses from these 10 agencies (131% response rate). In addition, 16 copies of the RSA (5 Person in Recovery, 5 Provider/Direct Care Staff, 5 Family/Significant Other/Advocate, 1 Director) were sent to Directors at 231 DMHAS agencies (3312 surveys mailed). Of these, 974 responses were received from 82 agencies (29% response rate), 69 Directors/CEOs, 347 Providers, 329 Persons in Recovery, 229 Family/Significant Other/Advocate (DMHAS, 2002).

Connecticut DMHAS (DMHAS, 2002) found a number of important results concerning the RSA. The statistical analysis yielded five strong factors: diversity of treatment options (12.24% of variance, $\alpha = .86$), consumer involvement and recovery education (12.1% of variance, $\alpha = .86$), life goals vs. symptom management (10.8% of variance, $\alpha = .76$), rights and respect (9% of variance, $\alpha = .71$), and individually-tailored services (9% of variance, $\alpha = .75$) (DMHAS, 2002). The results of this first Connecticut statewide study were 16 key findings. Three of those findings bore a similarity to what this study sought to uncover with the RSA-R:

Connecticut agencies vary in the provision of recovery-oriented practices

Agencies were rated highest on Rights and Respect

Agencies were rated lowest on Consumer Involvement and Recovery Education

(DMHAS, 2002, p. 2).

In a study of hospital workers, the RSA showed good validity and reliability (Salyers, Tsai, Stultz, 2007). In this particular study (Salyers, Tsai, Stultz, 2007), the provider version of the RSA was utilized and analyzed. Although this current study did

not garner responses from direct care providers, the person in recovery scored the provider influence on recovery (See Appendix F).

The RSA was used to assess the San Diego County, California recovery services (Hanger, 2013). Differences were found regarding gender and race, as well as among other RSA five factor domains ($n = 1710$). The overall person in recovery scores had a lower mean than the Connecticut results (Hanger, 2013).

The RSA-R has 32 items. It has five factors – life goals, involvement, treatment diversity, choice, and individually-tailored services. Although each of these factors can be calculated individually, an overall score is permissible by summing the scores and dividing by 32 (Recovery Self-Assessment: Items and Factor Loadings, 2012). The revised version, the RSA-R has fewer items than the original, 32 as compared to 36. Items were omitted that presumed a knowledge of agency policies and procedures, not readily available to individuals in recovery (O’Connell, et al., 2007). The RSA-R requires a brief administration time, 10 minutes, and it carries no fee (O’Connell, 2005).

The Making Decisions – Empowerment Scale (MDE). The Making Decisions – Empowerment Scale was created utilizing participants from a board of mental health providers and those in recovery (Rogers, Chamberlin, Ellison, & Crean, 1997). The board was assembled for this very purpose of creating a new recovery measure. The board was selected by the authors and provided different definitions of empowerment. From this group of general descriptors, 64 questions were comprised. Using these newly formed 64 questions, the researchers collected data from March – August 1992 (Rogers, et al, 1997).

The 64 questions were given to 271 participants in six states in six different type mental recovery programs (e.g., clubhouses). The results of the 64 question answers

were factor analyzed using principal components analysis with oblique rotation (Rogers, et al., 1997). Five strong factors emerged from the factor analysis. The authors labeled these factors self-efficacy – self-esteem, power – powerlessness, community activism, righteous anger, and optimism and control over the future. The five factors accounted for 54% of the variance. The resulting scale after eliminating the items that did not load significantly on one of the factors totaled 28 items (See Appendix B). The Making Decisions-Empowerment Scale Scales was then cross-validated with a number of different recovery and non-recovery participants and with a number of different scales measuring ancillary psychological factors.

The 28-item scale showed strong internal consistency with a Cronbach's alpha of .86. Correlations revealed many interesting facts (Rogers, et al., 1997). Empowerment as measured by the scale was not correlated with any demographics, including education. It was not correlated with participation in self-help programs. It was inversely correlated with participation in traditional mental health treatment. It was also significantly correlated with participation in community activities. Hours worked predicted empowerment for those who worked. Otherwise, total monthly income was a predictor.

The MDE has 28 items. One receives an overall score with four being the maximum. The MDS is scored on a four point Likert-type scales, ranging from strongly agree to strongly disagree. The scoring is reversed for some items. It is appropriate to calculate an overall empowerment score "by summing the scores of individual items and dividing by the total number of items" (Wowra & McCarter, 1999, p. 5).

Illness Management and Recovery Client Self-rating (IMR). Illness Management and Recovery was one of five, Substance Abuse and Mental Health Service

Administration (SAMHSA) endorsed treatments for individuals in recovery (Campbell-Orde, et al., 2005). The IMR curriculum includes scales for measuring recovery, one for the client and one for the clinician (Mueser, et al., 2004) (See Appendix E). The client and clinician can complete these scales more than once, along the curriculum and recovery process.

SAMHSA recommended the IMR Client Self-rating as a valid measure of individual recovery (Campbell-Orde, et al., 2005). The previous study cited as regards the RSA (Burgess, et al., 2010), also chose the IMR Client Scale as one of four recommended for individual recovery measurement in that country. The others chosen were the Recovery Assessment Scale (RAS), the Stages of Recovery Instrument (STORI), and the Recovery Process Inventory (RPI) (Burgess, et al., 2010, p. 4). The authors (Burgess, et al., 2010) evaluated the IMR Scale among with 22 other individual recovery scale candidates. The process for selecting these scales, including the IMR, was similar to the RSA selection procedure:

Explicitly measures domains related to personal recovery;

Is brief and easy to use (≤ 50 items);

Takes a consumer perspective;

Yields quantitative data;

Has been scientifically scrutinized;

Demonstrates sound psychometric properties (e.g., of internal consistency, validity, reliability and sensitivity to change);

Is applicable to the Australian context; and

Is acceptable to consumers (Burgess, et al., 2010, pp. 3–4).

The IMR Client Scale shows good internal consistency, with an alpha ranging from 0.68 – 0.72 in various studies (Burgess, et al., 2010, p. 19). The IMR Scales also show concurrent validity with many other scales of recovery, including the Recovery Assessment Scale (Burgess, et al., 2010) and the Rosenberg Self-Esteem Scale (Mueser, et al., 2006). The test – retest reliability (r) for the IMR Client Scale over two weeks was 0.81 – 0.82 (Burgess, et al., 2010, p. 19). The IMR scale psychometric properties were studied (Salyers, et al., 2007). The test-retest reliability for the 15 item client and clinician scales was substantiated, as well as

the consumer version was correlated with self-ratings of recovery and symptoms, and the clinician version was correlated with clinician ratings of community functioning, indicating convergent validity. The results suggest the IMR Scales have adequate psychometric properties and may be useful in treatment planning and assessing recovery in individuals with severe mental illness (Salyers, et al., 2007, p. 1).

The IMR scales were used in a study with those recovering from schizophrenia (Fardig, Lewander, Fredricksson, & Melin, 2011). The results indicated that

both versions of the scale demonstrated satisfactory internal reliability and strong test-retest reliability. The results also indicated convergent validity with interview-based ratings of psychiatric symptoms, self-rated symptoms, perception of recovery, and quality of life for both versions... (Fardig, et al., 2011, p. 1).

Currently, a randomized experiment is underway in Denmark utilizing the IMR with those recovering from schizophrenia and bipolar disorder (Dalum, et al., 2011). At seven Indiana community mental health centers, the IMR, its scales, and its curriculum

were tested for fidelity (Salyers, et al., 2009). This study found “positive changes in consumer outcomes” but that “organizational structures may be more difficult to transform in a short period” (Salyers, et al., 2009, p. 4).

The Sense of Community Index – 2 (SCI-2). The SCI-2 is the newer version of the long-standing and well-recognized Sense of Community Index (Chavis, Lee, & Acosta, 2008). The original Sense of Community Index (SCI) was “the most frequently used quantitative measure of sense of community in the social sciences” (Chavis, Lee, & Acosta, 2008, p. 1). It was used worldwide in numerous cultures, countries, and studies. It also was apropos for different situations and circumstances, such as “urban, suburban, rural, tribal, workplaces, schools, universities, recreational clubs, internet communities, etc.” (Chavis, Lee, & Acosta, 2008, p. 1). The original SCI was established “on a theory...that stated that a sense of community was a perception with four elements: membership, influence, meeting needs, and a shared emotional connection” (Chavis, Lee, & Acosta, 2008, p. 1).

Even though the SCI was popular for research in the social sciences, major weaknesses in its 12 item comprehensiveness became manifest (Chavis, Lee, & Costa, 2008; Townley, & Kloos, 2009). The original SCI entailed a four-factor structure. These factors were identified as membership, influence, integration and fulfillment of needs, and shared emotional connection (McMillan & Chavis, 1986). Subsequent studies did not confirm these factors or found weak statistical support for them (Long & Perkins, 2003; Obst & White, 2004). Others found the negative item wording and the true-false format as the source of weak statistical internal reliability (Peterson, Speer, & Hughey, 2006).

The authors (Chavis, Lee, & Costa, 2008) set out to remedy these weaknesses with the new SCI-2 (See Appendix C). The final form of the SCI-2 was adopted after testing with a sample of 1800 people (Chavis, Lee, & Costa, 2008). The results demonstrated a coefficient alpha

of .94, indicating strong reliability (Chavis, Lee, & Costa, 2008). Each of the subscales also showed reliability, coefficient alpha = .79 to .86 (Chavis, Lee, & Costa, 2008).

The new SCI-2 has 24 items. It can be scored along each of its four factors or summed for a composite score. This composite score results in “the total sense of community index” (Community Science, 2008, p. 1). This composite score was calculated for this present study.

The Consumer Satisfaction Survey (CSS). The state of Connecticut used and piloted the Connecticut Consumer Satisfaction Survey to evaluate its mental health and addiction services statewide, starting in 2005 (Tikoo, 2005). This survey became annual and was completed in 2006 and 2007, as well (Tikoo, 2006; 2007). The demographic section of this measure completed in 2008 is the one used in this study (Kirk, 2008) (See Appendix D).

The Connecticut evaluative process started in 1992 with Yale University, who ran the state-funded Community Mental Health Center (CMHC). Yale evaluated the CMHC and its agencies with a survey (Chinman, Allende, Weingarten, Steiner, Tworkowski, & Davidson, 1999). This initial survey found that providers underestimated the importance of input from persons in recovery, often pointing to them as responsible for any failures in treatment plan initiation and completion (Chinman, Allende, Weingarten, Steiner, Tworkowski, & Davidson, 1999).

The demographic questions of the CSS included agency, program, gender, age, general service category, race, and length of services. Every participant was requested to designate each of these. Each demographic choice became part of the overall statistical analysis.

The Rosenberg Self-Esteem Scale (RES). The Self-Esteem Scale (See Appendix G) has 10 items (Rosenberg, 1965). It is scored on a four-point Likert-type

scale from strongly agree to strongly disagree. Some of the items are reversed scored. Factor analysis has divided the RES scale into three factors: positive self-esteem, negative self-esteem, and global self-esteem. Positive self-esteem is scored with the positively phrased items. Negative self-esteem is scored with the negatively phrased items. Global self-esteem is scored with the totality of the items. Global self-esteem was calculated for this present study.

The Rosenberg Self-Esteem Scale (RES) (Rosenberg, 1965) was used in a recent major study applying it directly to recovery. The comparison was made between the RES and the Recovery Assessment Scale (RAS) (Mukolo, Heflinger, & Baxter, 2011). This study emphasized the importance of the RES by evaluating the RES as “a recognized self-esteem measure...used to assess the efficacy of psychiatric rehabilitation programs” (Mukolo, Heflinger, & Baxter, 2011, p. 4). The coefficient alphas in four other studies was reported as ranging from 0.88 to 0.90 (Mukolo, Heflinger, & Baxter, 2011). The results indicated a significant relationship between the RES global and positive self-esteem and the RAS, as the authors hypothesized (Mukolo, Heflinger, & Baxter, 2011). The RES also was correlated significantly with the IMR, the principle dependent measure in this study (Mueser, et al, 2007). The RES was used to predict the IMR, along with the other measures, in this study because of this significant relationship.

It was important for this present study that the measures have shown a statistical relationship in other studies. It was hypothesized that the same sort of relationships would be found. Specifically, the Venn diagram in Figure 2.1 anticipated this.

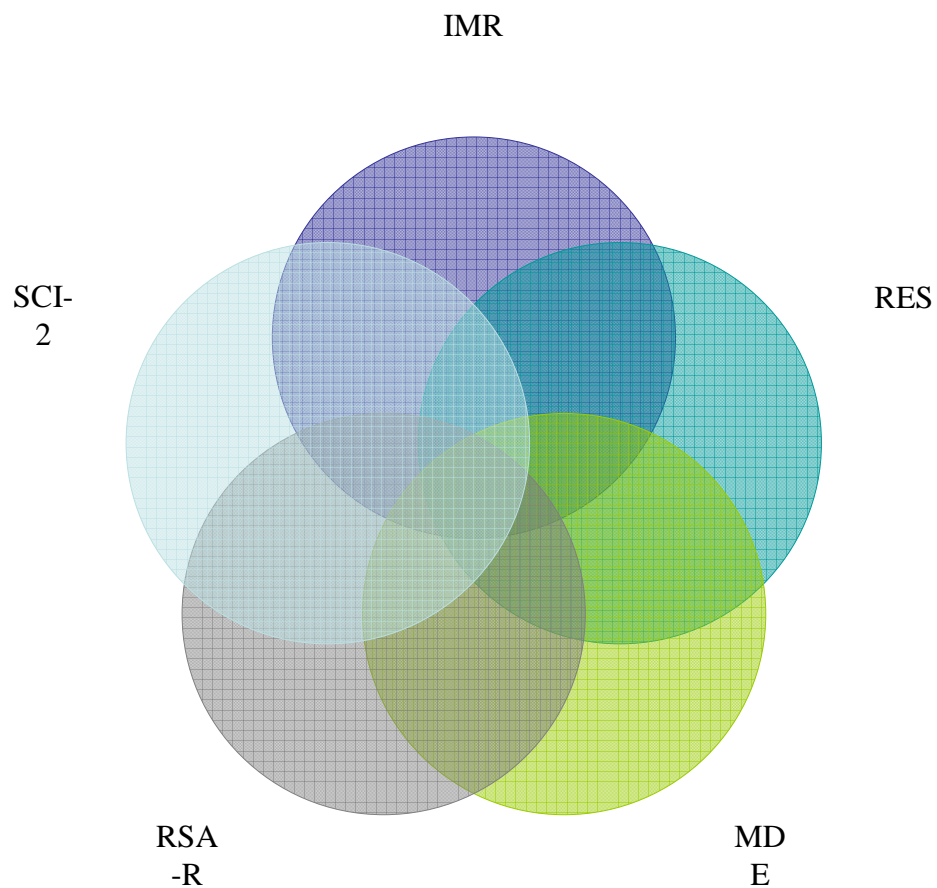


Figure 2.1. Hypothesized Relationship of the Recovery Measures Used in this Study

The IMR was listed at the top of the Venn diagram because it functioned as the dependent variable for part of this study. The IMR measured important components of recovery. “Items assess progress toward goals, knowledge about mental illness, involvement with significant others and self-help, time in structured roles, impairment in

functioning, symptom distress and coping, relapse prevention and hospitalization, use of medications, and alcohol and drug use” (Salyers, et al., 2009, p. 3). The IMR scales incorporated many of the following important variables.

Employment. Even after recognition that an employment problem exists for those individuals with chronic mental illness, including a history of substance abuse, and after the passage of laws to outlaw discrimination and mitigate the problem, such unemployment continues in alarming fashion. The fact remains that “there are 3 million people with severe mental illnesses in the nation’s communities, of whom 70%-90% - about 2 million people – are unemployed” (NAMI, 2012). Programs have helped to address this national problem. Many recognize what the Center for Rehabilitation points out with its slogan, “re-employment: the road back to mental health” (Center for Rehabilitation, 2013). Long-standing research showed that how one defined inpatient mental hospitalizations determined the way job interviewers reacted and assessed potential employees and how those employees can even negatively assess themselves (Rothaus, Hanson, Cleveland, & Johnson, 1964; Link, 1987; Wright, Gonfein, & Owens, 2000).

Supported employment for those individuals in recovery dates to the 1980’s with the Rehabilitation Act addressing the issue in 1986 and 1992 (Bond, Drake, Mueser, & Becker, 1997). Job coaches help those individuals in recovery succeed in jobs, but placement in work-study programs can actually impeded employment success (Bond, Drake, Mueser, & Becker, 1997). Positive correlations demonstrated that wages and time of task completion and perseverance connected to supported employment (Bond, Drake, Mueser, & Becker, 1997).

On the other hand, not having a job can lead to mental anguish and the further deterioration of those individuals in recovery (Stuart, 2006). If employers will hire those individuals in recovery, the vast majority (70%) reported that they were glad they did and would do so again (NAMI, 2012). Not surprisingly, the emphasis on work as a healthy psychological component has a long history in psychology itself. For example, Freud identified *lieben und arbeiten* (love and work) as the prime psychological factors of happiness and mental health (Erikson, 1994).

Housing. When the de-institutional movement and cause became paramount in the 1960's alternative housing for those individuals in recovery became a recognized need and continues to this day. Early studies showed rampant discrimination in the procurement of housing (Page, 1977). Beginning in the 1990's and continuing today, the desires and wishes of the consumer are now taken more into account (Sprebnik, Livingston, Gordon, & King, 1995). Agency support in finding housing, managing that housing and finances, taking medications, and participating in leisure activities, plus continued supports, became tantamount in housing success for those individuals in recovery (Carling, 1993). Individuals had greater housing satisfaction, overall psychological health, and situational stability if they had the primary choice in their residential circumstances (Sprebnik, Livingston, Gordon, & King, 1995).

Housing situations become important for those recovering from substance abuse. Developing a psychological sense of community (like that measured by the SCI-2) can lead to a greater likelihood of recovery (Graham, Jason, Ferrari, 2009). This sense of community was found to grow exponentially with the length of stay in the treatment housing setting (e.g., Oxford House) (Graham, Jason, Ferrari, 2009).

The homeless involved in recovery have acute housing needs. The provision of housing for the homeless can thwart the necessity and use of other services, such as shelters, in-patient hospitalizations, and jail (Culhane, Metraux, & Hadley, 2010). In New York City, provision of housing for the homeless saved the city approximately 40% in service usage (Culhane, Metraux, & Hadley, 2010). Earlier studies suggested that overall integration with the mental health system and services helped the homeless better adjust to changes in housing circumstances (Rosenbeck, Morrissey, Lam, Calloway, Johnsen, Goldman, Randolph, Blasinsky, Fontana, Calsyn, & Teague, 1993; Shern, Felton, Hough, Lehman, Goldfinger, Valencia, Dennis, Straw, & Wood, 1997). Later studies found that when it comes to those homeless with the dual-diagnoses of substance abuse and mental illness (often specifically served by ISA agencies), housing first before treatment was most beneficial (Padgett, Gulcur, & Tsemberis, 2006).

As part of their services, the integrated service programs attempt to transition the homeless to stable housing. Residential treatment living settings (RCF-PMI) are also available. Both these programs were included in this study.

Education. Of the outcomes cited thus far, employment and housing, postsecondary education per se for those individuals in recovery may constitute the latest research. Even though special education curriculum and laws go back more than a century, supported education programs were relatively new with their primary genesis in the 1990's. Agencies began to add supported education specialists.

When the university committed itself to formal, specialized programs to assist those in recovery, advantageous results appeared (Unger, Anthony, Sciarappa, & Rogers, 1991). Positive outcomes resulted from this formalized, university-based intervention

with fewer hospitalizations and increased competitive employment (Unger, Anthony, Sciarappa, & Rogers, 1991). Many colleges, universities, and community colleges have staff and offices dedicated to accommodations for all types of disabilities, including mental disabilities.

A formalized university-based supported education program was enacted in Michigan (MSEP) with positive success (Bellamy & Mowbray, 1998). Empowerment resulted from the MSEP with the major negative result being the time-limited nature of the program itself (Bellamy & Mowbray, 1998). It was later determined that the same factors that contribute to college success (e.g., income, activities, social support etc.) apply to those individuals in recovery (Collins, Mowbray, & Bybee, 2000). Interestingly, mental illness symptoms were not significant predictors of success or failure (Collins, Mowbray, & Bybee, 2000).

This current study includes postsecondary education as requested by the IMR scale as time spent in structured roles. This study included self-selected designations for any structured role pursuit including employment, volunteering, and education. This procedure had precedence in the county from which the sample was drawn (Schwartz, et al, 2012). Canadian assessment also focused on goals other than postsecondary even as regards educational goals per se. The age group 15-24 was targeted for assistance because this was the largest age category of individuals in recovery there (Canadian Mental Health Association, 2012). Education, at any matriculation level, had a positive impact on employment outcomes. This positive outcome effect on employment was direct and profound (Best, Still, & Cameron, 2008).

Psychiatric Hospitalization Days. Many researchers have counted psychiatric inpatient hospitalization days as an outcome of recovery. Dual-diagnosis was associated with higher rates of inpatient hospitalization (Drake, Essock, Shaner, Carey, Minhoff, Kola, Lynde, Osher, Clakr, & Rickards, 2001). It is also common to count emergency room visits as part of the outcome analysis (Schwartz, et al, 2012). Suicide attempts can increase the rate of subsequent inpatient hospitalization (Huffman, Wang, Saynina, Wren, Wise, & Horwitz, 2012). If full health care connections were established and maintained with those individuals in recovery, consequent emergency room visits could be reduced by 54% (Brown, Chung, Sun-Soon, Scheffler, & Adams, 2012). However, though a common precursor to hospitalization, this study does not include emergency room visits as part of the IMR questions. However, times of relapse and inpatient hospitalizations were specifically requested on the IMR.

Studies have found day treatment programs superior in outcomes to inpatient hospitalizations (Washburn, Vannicelli, Longabaugh, & Scheff, 1976). Other factors, such as age, resources, and insurance, often dictated inpatient hospitalization (Pottick, Hansell, Gutterman, & White, 1995; Huffman, et al, 2012). With the advent of improved medications, especially anti-psychotic medications, the number of involuntary commitments has decreased (Menniger, 2012). Higher social class, shorter duration of hospitalization, and treatment compliance all predicted a better outcome year after discharge for bipolar patients, whether hospitalized for mixed or manic episode (Keck, McElroy, Stakowski, West, Sax, Hawkins, Bourne, & Haggard, 1998). Prior hospitalizations sometimes was the best predictor of future ones (Zanarini, Frankenburg, Khera, & Bleichmar, 2001).

Programs. This study compares results from five different recovery programs. Specifically, comparisons were made among an alcohol and drug treatment program, an integrated service agency, a clubhouse, a residential program, and outpatient programs. Each of these programs offered a unique form of recovery support and promotion. The alcohol and drug treatment center offered classes, group and individual therapy, as well as a methadone clinic. The integrated service agency offered any form of assistance to help individuals maintain independent living. The clubhouse offered weekday gatherings, was open all day, and included lunch and social activities, as well as work placement. The residential program offered single rooms, meals, and included daily classes, as well nursing. The outpatient programs offered classes two to three days a week, complete with group discussion and problem solving.

Community Alcohol and Drug Treatment Programs. SAMHSA (2009) published a directory of all the community alcohol and drug treatment centers in the US, Puerto Rico, and five US territories. These programs were approved, certified or licensed by state or agencies. The number of these community treatment programs totaled 11,000. Some of these programs served adolescents as well as adults. A number of them specialized in co-occurring disorders, HIV/AIDS, or with pregnant women. Some provided language services, as well as methadone or buprenorphine drug therapy.

Aftercare or follow-up becomes a key element of effective alcohol or drug treatment. Recovery Management Checkups (RMC) was shown to be instrumental in controlling short-term symptoms as well as abstinence over a two-year period (Scott & Dennis, 2009). Some included community alcohol and drug treatment centers in the wave of new institutions available to those recovering from alcohol or substance abuse

(Krentzman, 2013). “Another new recovery institution is the Recovery Community Center (RCC) which provides a range of free services to individuals in recovery...”

(Krentzman, 2013, p. 155). AA is often a component of community substance abuse treatment centers. AA holds 55,000 weekly meetings in the US and its strengths are its cost, availability, and use of therapeutic elements, such as social support (Kelly, Magill, & Stout, 2009).

Integrated Services. Integrated services began in 1990 with the Village in Long Beach, California. This program focused on the recovery of those with both mental illness and substance abuse. The MHA Village works with adults and young adults. The program began in 1990 under California’s mental health department (MHA) auspices. The MHA purposely set out to create an integrated services program where those with mental disorders and substance abuse could find comprehensive treatment. Of special concern were the homeless, those about to be released from jail, or those about to become homeless. “Integrated services is the approach for adult mental health recovery in the Mental Health Services Act, passed by California voters in 2004” (The Village, 2013). The MHA Village has received national awards and honors and has inspired like services nationwide, including those in recovery in this particular study sample.

Soon after the Village opened to assist those in recovery, Johns Hopkins University opened integrated service agencies in Baltimore, Maryland. These two agencies, coupled with the Village success, inspired county officials from which the study sample was drawn to start four integrated service agencies in 1997. From one of these ISA agencies some of the participants were drawn. As previously indicated,

SAMHSA recognizes the ISA approach as an evidenced-based therapy for recovery from mental illness and substance abuse.

The ISA exists primarily to serve the dually diagnosed. Studies highlight the need for this type of dual emphasis. The progenitors of the IMR used in this study echoed such a sentiment.

The clearest implication of the research on prevalence is that all programs for people with severe mental disorders should be considered dual diagnosis programs. Clients with co-occurring disorders are the norm rather than the exception. Every mental health clinician and every mental health program should embrace this reality and adopt reasonable modifications. Specialty teams will simply not suffice, because many clients will be left undiagnosed, untreated, and without needed supports for recovery. Further, many programmatic elements will not be tailored for the needs of dually disordered clients (Drake, Mueser, & Brunette, 2007).

Clubhouses. The first clubhouse began in New York City in 1950 and was called the Fountain House (Lichenstein, 2003). Presently, there are an estimated 300 clubhouses worldwide (Lichenstein, 2003). The clubhouse environment for those in recovery focuses on three general goals: work, friendship, and community (Lichenstein, 2003). Clubhouse members make many of the decisions and provide much of the volunteer work for the daily functioning of the clubhouse itself. Programs to foster each of the general goals occur on a daily basis.

Clubhouses can provide a recovery environment. Clubhouse organizations functioned as a “collaborative service” among the person in recovery, professionals, and

family (Jacobsen & Greenley, 2001). In a study at a clubhouse based on Fountain House, a strong association was found between stigma and self-esteem (Phelan, et al., 2001). The study used the Rosenberg Self-Esteem Scale to measure self-esteem and further found that those in recovery would much rather socialize with others in recovery like them (Phelan, et al., 2001).

Residential Care Facilities for Persons with Mental Illness (RCF-PMI). In the state from which the study sample was drawn, RCF/PMI residential settings totaled 13 with 284 beds (Iowa Department of Inspections and Appeals, 2013). The state describes these residential setting programs as,

RCF/PMI Residential Care Facilities for Persons with Mental Illness provide accommodation, board, personal assistance and other essential daily living activities to three or more individuals for a period exceeding 24 hours. Clients must be able to sufficiently or properly care for themselves, but do not require the services of a registered or licensed practical nurse. These facilities emphasize individualized program planning in an aggressive effort to assist clients to a more independent way of life (IDIA, 2013).

Furthermore, the state code (Iowa Code 481-62) mandates what services the residents of RCF-PMI receive. These services must be chronically age-appropriate and include community living, training services. No abuse of any type is permissible. An Individual Program Plan must be completed with each resident setting goals. Skill programs that must be made available include independent living skills, socialization skills, communication skills, leisure time and recreational skills, and parenting skills.

Outpatient Programs. Outpatient programs tend to meet three or more days per week. They usually meet for two hours or more each of those days. They include intensive rehabilitation programs, dual-diagnosis programs, partial hospitalization programs, and intensive outpatient programs. The latter two programs most often follow an inpatient hospitalization. They often include the use of some curriculum (e.g., the Illness Management and Recovery curriculum).

Common program dynamics were found effective for outpatient programs. These dynamics included a good relationship with the staff, an emphasis on the cost-benefit ratio, personal goals, changing to a support environment, and predicting and preparing for crisis (Carey, 1996). Common results or outcomes were also found across outpatient programs. The most effective programs emphasized direct behavioral interventions, influenced recovery-linked issues but did not generalize to all factors of living, demonstrated that long-term interventions were superior to short-term, excelled when close to natural environments, and coupled skills training with off-site support (Mueser, Drake, & Bond, 1997).

The five programs examined in this study were community alcohol and drug treatment, residential facilities, integrated services, outpatient, and clubhouses. The five agencies examined utilized these five programs. One of the agencies offered two of these programs. Another agency offered three of these programs. One of the agencies was designated as “other.”

The other agency category included volunteers from a youth program and from private psychiatry. The youth programs had program elements closest to the outpatient programs. The main, if not only, differences were the age of participants. A few persons

participated solely in private psychiatric services. These were their only mental health services. The youth and psychiatric clients though counted together as an “other” agency, were counted together with the outpatients when it came to programs. Psychiatry alone was shown to be effective when compared to family psych-education, involvement, and support (Merinder, Viuff, Langersen, Clemmensen, Misfelt, & Espensen, 1999). Psycho-education in psychiatry sessions did influence overall satisfaction with services, but had no effect on relapse rate, adherence, symptomatology, personal insight, or social functioning (Merinder et al., 1999). Drug therapy was demonstrated to produce beneficial results, especially if a family member had the same diagnosis (Mendlewicz, Fieve, & Stallone, 1973). Psychiatric students showed better examination scores if they were instructed via problem-based learning as opposed to traditional methods (McParland, Noble, & Livingston, 2004). Some of the sample chose to have their problems addressed in private psychiatry.

Summary

The variables included in this present study are measures of note and outcomes with a rich research history. Twelve variables were utilized to discover what factors contribute to recovery. These variables were empowerment, sense of community, illness management, self-esteem, self-determination, agency, program, gender, age, general type of services, race, length of services, and five measures of recovery. This study featured measures that were considered by the psychological community as reliable and valid. These measures were the Making Decisions-Empowerment Scale (MDE), The Illness, Management and Recovery-Client Self-rating (IMR), the Sense of Community Index-2 (SCI-2), the Rosenberg Self-Esteem Scale (RES), and the Recovery Self Assessment-

Revised (RSA-R). The MDE measured empowerment. The IMR measured overall illness management. The SCI-2 measured sense of community. The RES, of course, measured self-esteem. The Connecticut Consumer Satisfaction Scale (CSS) introductory section was used to gather demographic information. In addition, the RSA-R measured aspects of all the other measures, especially self-determination. The RSA-R was the featured measure of this study. The entire study was based on the person in recovery perspective.

The IMR functioned as the dependent variable for part of this study. The IMR measured important recovery variables such as goals, symptoms, and time in the structured roles of employment and education, as well as family support and psychiatric inpatient days. This present study included these outcomes as requested by the IMR. The housing component was assessed partially with the residential program variable designation.

In the next chapter, the specific sample and statistical procedures utilized find delineation. Chapter 3 examines and outlines these procedures in detail. Let us examine these procedures in more detail in preparation for data collection, results, and analyses.

CHAPTER 3

RESEARCH METHODOLOGY

General Research Strategy and Design

This study examined factors that contributed to recovery. This study examined the construct of recovery from mental illness and substance abuse. Variables effecting recovery were identified and included in the study. These variables included empowerment, sense of community, illness management, self-esteem, and self-determination as measured by the Making Decisions-Empowerment Scale, the Sense of Community Index-2, the Illness Management and Recovery Client Self-rating, the Rosenberg Self-Esteem Scale, and the Recovery Self Assessment-Revised. The other important variables were agency, program, gender, age, general type of services, race, and length of services. This present study added to the understanding of recovery by identifying important recovery variables solely from the person in recovery perspective. This study drew its sample from those diagnosed with mental disorders and substance abuse in different treatment settings and programs. Of specific interest was the role of the Recovery Self Assessment-Revised because it measured from the self-determination vantage point.

The overarching research questions in this study were:

1. Are there any gender differences that exist regarding a sense of recovery?
2. How does the Recovery Self Assessment-Revised (RSA-R) correlate with the other four measures, the Making Decisions-Empowerment Scale (MDE), the Sense of

Community Index-2 (SCI-2), the IMR Client Self-rating (IMR), and the Rosenberg Self-Esteem Scale (RES)?

3. Is there any agency, program, or general category differences in recovery?
4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?
5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

In general, this study investigated the contributing factors of recovery. Twelve variables were investigated utilizing the five measures: the Making Decisions-Empowerment Scale, the Sense of Community Index-2, the Illness Management and Recovery Client Self-rating, the Rosenberg Self-Esteem Scale, and the Recovery Self Assessment-Revised, as well as agency, program, gender, age, general type of service, race, and length of service. To determine these relationships among variables, an independent samples *t*-test, multiple analyses of variance (MANOVA) and correlations were calculated.

The hierarchical multiple regression was accomplished in block fashion, with block one including the participant demographics, block two consisting of the three other inventories (MDE, SCI-2, RSE), and block three made up of the RSA-R itself. These blocks were used to predict the dependent variable of the Illness Management and Recovery Client Self-rating score. Subsequent hierarchical multiple regressions were calculated to elucidate further the relationship of the variables.

Participants

This study examined recovery from mental illness and substance abuse. This recovery assessment was entirely from the person in recovery perspective. Specifically of interest was how the Recovery Self Assessment–Revised (RSA-R) measured such recovery. This study drew its sample from those diagnosed with mental illness and/or alcohol and drug abuse in different treatment programs and agencies.

One hundred-nine (109) individuals participated in this study. They were located through a countywide Positive Behavioral Support Network. Each agency volunteered to participate as an agency entity. Each agency, in turn, asked for volunteers from those whom they served. Total administration time for volunteers to complete the study was approximately 30 minutes. Volunteer participants represented five agency settings: an alcohol and drug treatment center (54), a government hospital (27), a private community nonprofit mental health center (15), a clubhouse (8), and other, youth program or private therapy individuals (5). These 109 individuals participated in five different program types: alcohol and drug treatment (54), integrated service agency (ISA) (17), clubhouse (8), residential (7), intensive outpatient (23). See Table 3.1. Some of the agencies and programs had identical names. The top line of Table 3.1 indicates program; the side column indicates agency. The five programs also split into three general service categories: emotional/mental (44), alcohol or drugs (44), or both emotional/mental and alcohol or drugs (21). See Table 3.2.

Table 3.1

Participants according to Agency, Program (N = 109)

Agency	Alcohol & Drug Tx	ISA	Clubhouse	Residential RCF-PMI	Intensive Outpatient
A & D Center	54				
Gov. Hosp		17		1	9
Comm. MH				6	9
Clubhouse			8		
Other					5

Note. Tx = treatment; ISA = integrated service agency; RCF-PMI = residential care facility for persons with mental illness; A & D = alcohol and drug; Gov. Hosp = governmental hospital; Comm. MH = community mental health center

Table 3.2

General Type of Service Category (N = 109)

	Emotional/Mental	Alcohol or Drugs	Both	Total
Alcoh. & Drug		41	13	54
Integrated Ser.	14	1	2	17
Clubhouse	5	1	2	8
Residential	6	0	1	7
Outpatient	19	1	3	23
Total	44	44	21	109

The age of the participants ranged from under 20 years old to over 65. The under 20 was six, the 21-24 age was 11, the 25-34 was 33, the 35-54 was 33, the 55-64 was 14, and the over 65 was six. The distribution was essentially normal.

Table 3.3

Age Ranges and Frequencies

Age	n	%
Under 20	6	6.4
21-24	11	10.1
25-34	33	31.2
35-54	33	32.1
55-64	14	14.7
Over 65	6	5.5
Total	109	100.0

The sample varied slightly on race. These total included white (83), Black/African American (10), American Indian/Alaskan (1), Hawaiian/Pacific Islander (0), Asian (1), Mixed (7), and Other (1). These divisions reflected the categories of the CSS demographic section (Kirk, 2008). See Table 3.4.

Table 3.4

Distribution by Race

Race	n	%
White	88	80.7
Black/African American	10	9.2
American Ind./ Alaskan	2	1.8
Native Hawaiian/ Pacific Is.	0	0
Asian	1	.9
Mixed	7	6.4
Other	1	.9
Total	109	100.0

The length of service was categorized as less than one year, 12 months-2 years, more than 2 years, and more than 5 years. The distribution was less than one year (58), 12 months-2 years (12), more than 2 years (8), and more than five years (5). Again, these divisions reflected the CSS categories (Kirk, 2008). The categories exhibited a bimodal distribution. See Table 3.5 below.

Table 3.5

Length of Service

Length	n	%
Under one year	58	55.8
12 months-2 yrs.	8	11
more than 2 yrs.	12	7.3
more than 5 yrs	26	23.9
missing	5	4.6
Total	109	100

Data Collection Procedure

Prior to data collection, the study proposal was submitted to, and approved by, the university Institutional Review Board. Agencies from a county Positive Behavior Support Network were solicited to participate. Those agencies who volunteered solicited persons in recovery for the study. The agencies gathered these individual in recovery from those they served. The individuals volunteered, in essence, to represent their agency. They were informed that no individual results would be available, only agency results. The first group chronologically, an integrated service agency group, completed the measures together at a local university. Subsequent groups each completed the measures at their own agencies and program settings. These agencies and settings included a nonprofit community mental health center, which provided volunteers from two treatment settings, residential and Intensive Psychiatric Rehabilitation (IPR). The same governmental hospital agency from which the Integrated Service Agency volunteers were garnered also provided volunteers from their Intensive Outpatient Program (IOP) and residential setting. A clubhouse provided volunteers from its clubhouse program. A community alcohol and drug treatment center provided volunteers. Additionally, online forms were made available on the university Qualtrics website. Only two individuals in private psychiatry who used medications availed themselves of this online completion opportunity.

All data was kept in the researcher's locked home in a secure box. Only the researcher had access to consent forms and the measurement answers. The raw data was transferred to an SPSS program.

Data Analysis

This study centered on the identification of contributing variables to recovery. It evaluated recovery solely from the person in recovery perspective. Of special interest was the RSA-R and its contribution to the measurement of recovery. In order to evaluate the RSA-R, it was included with other well-recognized instruments of recovery (MDE, SCI-2, IMR, RES) and statistically compared. All these recovery measures formed the test variables for gender differences. This answered research question number one: 1. Are there any gender differences that exist regarding a sense of recovery? An independent-samples *t* test determined gender differences.

This study further sought to elucidate the relationship of the RSA-R to the other measures of recovery, the MDE, the SCI-2, the IMR, and the RES. These Pearson Product-Moment Correlation Coefficients helped answer research question number 2. How does the Recovery Self Assessment-Revised (RSA-R) correlate with the other four measures, the Making Decisions-Empowerment Scale (MDE), the Sense of Community Index-2 (SCI-2), the IMR Client Self-rating (IMR), and the Rosenberg Self-Esteem Scale (RES)?

This study further used the RSA-R as one of the dependent variables in two MANOVAs. The agency, program, and general service category were calculated in one MANOVA. Age, race, and length of service were ascertained in the other MANOVA. These statistical calculations answered research questions number 3 and 4: 3. Is there any agency, program, or general category differences in recovery? 4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?

Finally, a multiple hierarchical regression was calculated. Block one included all the agency, program, service, gender, age, race, and length of service variables. Block two included all the MDE, SCI-2, and RES recovery measure variables. Block three consisted of the RSA-R alone. All of these blocks were used to predict the dependent variable of the IMR score. These results answered research question number 5:

5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

Three subsequent multiple hierarchical regressions with different variable orders were calculated to clarify further the relationship among variables. The answer to these questions verified the predictive value of the RSA-R in the sample. The contribution of the RSA-R to the measurement of recovery for this sample was identified. Specifically, how did the RSA-R contribute to the prediction of the IMR score, the dependent variable, and how the RSA-R fit in the total measurement of recovery.

Research Question 1. Research question 1 was, “are there any gender differences that exist regarding a sense of recovery?” There were two independent groups that comprised the sample and these had to do with gender. An independent-samples *t* test was calculated. The two genders were compared as regards the measures of recovery: the MDE, the SCI-2, the IMR, the RSA-R, and the RES. Significant results were noted and provided in table fashion. Gender totals were almost identical, males = 55, women 53, with one-person not indicating gender.

Research Question 2. The Pearson Product Moment Correlation Coefficients statistical technique addressed research question 2, how does the RSA-R correlate with the other four instruments, the Making Decisions-Empowerment Scale, the Sense of

Community Index-2, the IMR Client Self-rating, and the Rosenberg Self-Esteem Scale? Correlation coefficients were computed among the five recovery scales: the RSA-R, the IMR, the MDS, the SCI-2, and the RES.

The Bonferonni approach was utilized to control for Type I error across the 10 correlations, a p value of less than .005 (.05/10) was required for significance. The results of the correlation study were presented in table fashion in Chapter 4 and those of significance noted. Those correlations greater than .30 were identified. The correlation of the RSA-R with the RES was hypothesized to be insignificant. In general, correlations of the RSA-R with the other recognized scales of recovery were hypothesized to demonstrate significance, exhibiting concurrent validity especially with the IMR. It was hypothesized that this is where the correlations of the RSA-R and the other four recovery instruments would statistically fall. Correlations greater than .70 actually demonstrated too strong a relationship, wherein the same construct was duplicated and nothing new or different was calculated with the use of the measurement.

Research Questions 3 and 4. The programmatic and demographic information included agency, program, gender, age category, general service category, race, and length of services, as requested on the CSS (See Appendix D). This study included the comparison of agency and program effectiveness. In other words, the study identified which agency and programming produced recovery according to the self-report of this particular sample. The different agencies and their programs included those member agencies of the Positive Behavior Support Network. Participant general service categories were compared, as well, and the demographic factors of age, race, and length of services.

The MANOVA statistical procedure addressed separately both research questions 3 and 4:

3. “Is there any agency, program, or general category differences in recovery?”
 4. “Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?”
- Two separate MANOVA compared means. Even though hierarchical regression was at the center of this study’s statistical analysis, descriptive statistics informed this study at a general level. The means were compared in an MANCOVA. Significant results were presented in table fashion in Chapter 4. All of the recovery measures (MDE, SCI-2, IMR, RSA-R, RES) served as the dependent variables for each MANOVA. The first MANOVA compared the means of agencies, programs, and general service categories with the dependent measure variables. The second MANOVA calculated the mean differences for age, race, and length of service with the same dependent variables.

Research Question 5. The main statistical analyses included hierarchical multiple regression. Although no direct cause-and-effect was claimed or was proven as in a true randomized experiment, the correlation and regression methods provided procedures “to measure the association between variables; regression is used to predict one variable from the other (or many others)” (Tabachnick & Fidell, 2007, p. 56). The correlations and regressions provided a valuable statistical picture.

This hierarchical statistical procedure helped answer research question 5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating? In this analysis, multiple linear independent variables were used to predict the criterion, or dependent variable of the IMR score. The independent variables were all the agency,

program characteristics and demographic information (Block 1), the measures of recovery themselves: the MDE, the SCI-2, and the RES (Block 2), and the RSA-R alone (Block 3). Subsequent hierarchical multiple regressions with a different order of predictors were used to explicate further the results.

The RSA-R was the variable of interest. The question is how the four other survey instrument scores correlated with the RSA-R score. In addition, how well do the four measurements (MDE, SCI-2, RES, and RSA-R) predict the IMR?

The IMR was chosen as the dependent variable because of its comprehensive inclusion of many important recovery outcomes. These variables are commonly measured outcomes.

Items assess progress toward goals, knowledge about mental illness, involvement with significant others and self-help, time in structured roles, impairment in functioning, symptom distress and coping, relapse prevention and hospitalization, use of medications, and alcohol and drug use (Salyers, et al, 2009, p. 3).

Research Instruments and Measures

Five instruments were used in this study. The measures used in this study were the Making Decisions-Empowerment Scale (MDE) (Sciarappa & Rogers, 1991), the Illness, Management, and Recovery – Client Self-rating (IMR) (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004), the Sense of Community Index-2 (SCI-2) (Chavis, Lee, & Acosta, 2008), and the Rosenberg Self-Esteem Scale (RES) (Rosenberg, 1965). The Connecticut Consumer Satisfaction Survey (CSS) (Kirk, 2008) introductory section was used as an objective measure of participant demographics. The IMR scale

functioned as the dependent variable. Along with these measures of recovery, the study collected demographic survey information utilizing the CSS to predict all of the recovery measures. Each measure was correlate with the Recovery Self Assessment – Revised (O’Connell, et al, 2007). Each research instrument has its own composition qualities.

The Connecticut Consumer Satisfaction Survey (CSS) (Kirk, 2008). The CSS was developed to gather mental health and addiction services and program information in Connecticut (Tikoo, 2005, 2006; Kirk, 2008). It includes an introductory section requesting demographic information. This was the portion of the CSS used for this study (See Appendix D). This information included agency, program, gender, age, general service category, race, and length of services. The extant categorical divisions of the CSS were employed in this study.

The Making Decisions-Empowerment Scale (MDE) (Sciarappa & Rogers, 1991). The MDE registered how freely the person in recovery believed choices were made. This scale was originally created utilizing participants from a board of mental health providers and those in recovery (Rogers, Chamberlin, Ellison, & Crean, 1997). The board selected provided different definitions of empowerment. From this group of general descriptors, 64 questions were written. The researchers collected data from March – August, 1992 (Rogers, et al, 1997). These 64 questions were given to 271 participants in six states in six different type mental recovery programs (e.g., clubhouses). The results were factor analyzed using principal components analysis with oblique rotation. Five strong factors emerged. These factors were labeled as self-efficacy – self-esteem, power – powerlessness, community activism, righteous anger, and optimism – control over the future (Ralph, Kidder, & Phillips, 2000). These factors accounted for

54% of the variance. The scale was cross-validated with a number of different recovery and non-recovery participants and with a number of different scales measuring ancillary psychological factors.

The MDE has 28 items (See Appendix B). Each were scored on a four point Likert-type scale from strongly agree to strongly disagree. Seventeen of its items were reverse scored (1, 2, 4, 5, 8, 10, 11, 12, 13, 16, 17, 18, 21, 22, 23, 24, and 25). Although it has five factors, a composite score can be used by calculating the mean for the total. One receives an overall score with four being the maximum. SAMHSA reviewed the MDE for evaluative use and found it appropriate for leadership and training purposes (Ralph, Kidder, & Phillips, 2000). The MDE 28 items ranged from .49 to .79 loadings on each of its five factors (Rogers, et al, 1997). Cronbach's alpha was .86 showing high internal consistency (Rogers, et al, 1997) and was cited as accurate in other reports (Ralph, Kidder, & Phillips, 2000).

The Illness Management & Recovery Client Self-rating (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004). The IMR measured an overall estimation of recovery management from the client perspective. Illness Management and Recovery was one of five, SAMHSA-endorsed treatments for individuals with mental disorders (Campbell-Orde, et al., 2005). IMR also includes scales for measuring recovery, one for the client and one for the clinician (Mueser, et al., 2004) (See Appendix E).

SAMHSA recommended the IMR Client Self-rating Scale as a valid measure of individual recovery (Campbell-Orde, et al., 2005). Burgess, et al., (2010) chose the IMR Client Self-rating as one of four recommended for individual recovery measurement in

Australia. The authors (Burgess, et al., 2010) evaluated the IMR Scale among with 22 other individual recovery scale candidates.

The IMR Client Scale shows good internal consistency, with an alpha ranging from 0.68 – 0.72 in various studies (Burgess, et al., 2010, p. 19). Concurrent validity with four other recovery measures of note is good, including the Recovery Assessment Scale (Burgess, et al, 2010, p. 19). The test – retest reliability (r) for the IMR Client Scale over two weeks was 0.81 – 0.82 (Burgess, et al., 2010, p. 19). The IMR – Client Version has 15 items. All items are scored on a five-point scale with phraseology suited to the individual question, all with one indicating a low score and five a high score. It includes questions concerning psychiatric hospitalizations, medications, and community interaction. The IMR received a summed composite score.

The Sense of Community Index – 2 (Chavis, Lee, & Acosta, 2008). The SCI-2 identified how well the person in recovery believed relations were with others and society. The SCI-2 was the newer version of the long-standing and well-recognized Sense of Community Index (Chavis, Lee, & Acosta, 2008). The original Sense of Community Index (SCI) is “the most frequently used quantitative measure of sense of community in the social sciences” (Chavis, Lee, & Acosta, 2008, p. 1). The original SCI was established “on a theory...that stated that a sense of community was a perception with four elements: membership, influence, meeting needs, and a shared emotional connection” (Chavis, Lee, & Acosta, 2008, p. 1).

Even though the SCI was popular for research in the social sciences, major weaknesses in its 12 item comprehensiveness became manifest (Chavis, Lee, & Costa, 2008; Townley & Kloos, 2009). The original SCI entailed a four-factor structure. These factors were identified as membership, influence, integration and fulfillment of needs, and shared emotional connection

(McMillan & Chavis, 1986). Subsequent studies did not confirm these factors or found weak statistical support for them (Long & Perkins, 2003; Obst & White, 2004). Others found the negative item wording and the true-false format as the source of weak statistical internal reliability (Peterson, Speer, & Hughey, 2006).

The authors (Chavis, Lee, & Costa, 2008) set out to remedy these weaknesses with the new SCI-2 (See Appendix C). The final form of the SCI-2 was adopted after testing with a sample of 1800 people (Chavis, Lee, & Costa, 2008). The results demonstrated a coefficient alpha of .94, indicating strong reliability (Chavis, Lee, & Costa, 2008). Each of the subscales, reinforcement of needs, membership, influence, and shared emotional connection, also showed reliability, coefficient alpha = .79 to .86 (Chavis, Lee, & Costa, 2008).

The SCI-2 had one general question about the community scored on a six point Likert-type scale. It then has 24 questions scored on a four point Likert-type scale from not at all to completely. The SCI-2 required insertion of the specific name of the community under investigation. The SCI-2 was patterned after the 12-item original SCI (Chavis, Florin, Rich, & Wandersman, 1987). It can be scored as a composite by summing questions 1-24 (Chavis, et al., 2008).

Recovery Self Assessment-Revised (O'Connell, et al, 2007). The state of Connecticut DMHAS (Department of Mental Health Addiction Services, 2002) conducted a significant study utilizing the RSA. This particular study researched the RSA with 122 individuals at 10 DMHAS funded agencies. They received 148 responses from these 10 agencies (131% response rate). In addition, 16 copies of the RSA (5 Person in Recovery, 5 Provider/Direct Care Staff, 5 Family/Significant Other/Advocate, 1 Director) were sent to Directors at 231 DMHAS agencies (3312 surveys mailed). Of these, 974 responses were received from 82 agencies (29% response rate) 69

Directors/CEOs, 347 Providers, 329 Persons in Recovery, 229 Family/Significant Other/Advocate (DMHAS, 2002).

The state of Connecticut DMHAS (Department of Mental Health Addiction Services, 2002) found a number of important results. The statistical analysis yielded five strong factors: diversity of treatment options (12.24% of variance, $\alpha = .86$), consumer involvement and recovery education (12.1% of variance, $\alpha = .86$), life goals vs. symptom management (10.8% of variance, $\alpha = .76$), rights and respect (9% of variance, $\alpha = .71$), and individually-tailored services (9% of variance, $\alpha = .75$) (DMHAS, 2002). The results of this first Connecticut statewide study were 16 key findings.

The RSA-R (See Appendix F) person in recovery version has 32 items (O'Connell, et al., 2007). Of these, 22 deal with staff behavior and attitudes, eight items reflect the person, and two concerns the program in general. All items are scored on a five point Likert-type scale, ranging from strongly disagree to strongly agree and include the additions of N/A (not applicable) and D/K (don't know) responses (O'Connell, et al., 2007). It can be scored as a composite by summing the items and dividing by the total number of items (32) (O'Connell, et al., 2007).

Rosenberg Self-Esteem Scale (Rosenberg, 1965). The Rosenberg Self-Esteem Scale (RES) (Rosenberg, 1965) has 10 items (See Appendix G). It delineated three factors: positive, negative, and global. Some of its ten items were reversed scored (2, 5, 6, 8 and 9). The RES was originally developed in the 1960s. The original sample consisted of 5,024 high school juniors and seniors from 10 randomly selected schools in New York State. The scale generally has high reliability: test-retest

correlations are typically in the range of .82 to .88, and Cronbach's alpha for various samples are in the range of .77 to .88 (University of Maryland, 2013).

The RES can be scored as a composite by simply summing the ten items. The total ranged from 0-30. Normal range was considered between 15-25. A score below 15 indicated low self-esteem (Growing Self-esteem, 2013).

Of the 109 participants, one did not complete the RES for some unknown reason. This missing score was treated like other missing data in the study. It was simply omitted.

Summary

This study employed 12 variables to uncover which ones played a significant role in recovery from the person in recovery's perspective. These 12 variables included empowerment, sense of community, illness management, self-esteem, self-determination as measured by the Making Decisions-Empowerment Scale, the Illness Management and Recovery Client Self-rating, the Sense of Community Index-2, the Recovery Self Assessment-Revised, and the Rosenberg Self-Esteem Scale. The other variables were agency, program, gender, age, general type of services, race, and length of services. All these variables were measured from the person in recovery perspective. The measure of special interest was the Recovery Self Assessment-Revised. The Recovery Self Assessment is an evaluative measurement tool endorsed by SAMHSA. The RSA measures the recovery environment, as well as individual recovery. SAMHSA publishes the text of the RSA and offers the RSA to the public via contact with the authors. In the original RSA article, (O'Connell, 2005), the authors encouraged future research to test the construct and criterion-related validity of RSA in comparison to other recognized

measures of recovery. This was exactly what this present study did, testing the newest version of the RSA, the RSA-R.

This study compared the RSA-R to four other well-known and established measures of recovery. This study correlated all these measures. This study also used the RSA-R to predict the recovery outcomes as measured by the IMR Client Self-rating. This study assessed five different agency settings and five program treatments for recovery effectiveness. This study calculated gender differences in the sample. This study further delineated the roles of agency, program, general category of service, age, race, and length of service as regards recovery.

The five recovery measure scores utilized in this study constitute important variables of the study. The MDE (Sciarappa & Rogers, 1991) measures empowerment, the IMR - Client Self-rating (Mueser, Gingerich, Salyers, McGuire, Reyes, & Cunningham, 2004), measures illness management, the SCI- 2 (Chavis, Lee, & Acosta, 2008) measures sense of community, the RSA-R (O'Connell, et al., 2007) measures self-determination, and the RES (Rosenberg, 1965) measures self-esteem. The demographic section of the CSS (Connecticut Department of Mental Health and Addiction Services, Kirk, 2008) was used to collect information concerning agency, program, general service category, gender, age, race, and length of services.

Participants answered questions on the five inventories and provided demographic information. These results were analyzed using appropriate and well-recognized statistical procedures. All the varying measures and demographics were compared statistically.

Each of the 109 participants received an overall composite score for each of the surveys. Via correlations, this study compared the measures with one another. Especially of note, was how statistically strong the RSA-R compared with the other measures and agency, program and demographic variables when used in predicting the IMR score.

The RSA-R was investigated with a number of noteworthy statistical procedures, namely independent-samples *t* test, correlations, MANOVA, and hierarchical multiple regression. Twelve variables were included in all, the five survey instruments each measuring aspects of recovery, with the addition of agency, program, general category of service, gender, age, race, and length of service. Five different agencies were compared. Five different program types also were compared.

The one hundred nine volunteers participated from the different treatment agencies and program settings. Agencies included an alcohol and drug treatment center, a government hospital, a private nonprofit community mental health center, a clubhouse, and private psychiatric treatment. Program types included alcohol and drug treatment, ISA, RCF-PMI facilities, clubhouses, and outpatient treatment programs.

Results from this study provided the psychological research community with more information regarding the utility of the RSA-R. The results in the next chapter further illuminate the statistical characteristics of the RSA-R in the present sample. Tables and diagrams were included wherever beneficial for a better understanding. Not to be lost in the procedural results and discussion was the importance of the participant perspective. Throughout this study, the person in recovery functioned as the authority concerning recovery.

CHAPTER 4

RESULTS

The purpose of this study was to investigate the variables of recovery. The recovery variables were empowerment, sense of community, illness management, self-esteem, self-determination, agency, program, gender, age, general service category, race, and length of services. A study sample was collected from a major Midwestern city. A total of 109 individuals participated in the study. Five agencies participated, an alcohol and drug treatment center, a government hospital, a nonprofit community mental health organization, a clubhouse, and other private or youth programs. Five different program types were investigated, alcohol and drug treatment, an integrated service agency, a clubhouse, a residential setting, and intensive outpatient/intensive psychiatric programs. The type of agencies and programs were outlined in Chapter 3 in Table 3.2. To interpret these results, one needed to understand that some of the agencies and some of the programs have identical names. However, as the Table 3.1 demonstrated, some of the agencies employed more than one program. Of note was that approximately half the sample was primarily and currently in treatment for substance abuse (54) and the other, half for mental health reasons (55). However, as noted earlier in Chapter 3, this was not how the sample characterized itself, especially when the third option of service reception for both emotional/mental health and alcohol or drugs was presented (See Table 3.2).

All the participants completed five measures of recovery. One participant did not complete the Rosenberg Self-Esteem Scale (RES) and therefore this score was omitted from the analysis. Data analyses were conducted utilizing an SPSS Program (Statistics

Package for Social Sciences, SPSS Version 21). Separate analyses were conducted for each research question. The research questions were:

1. Are there any gender differences that exist regarding a sense of recovery?
2. How does the Recovery Self Assessment-Revised (RSA-R) correlate with the other four measures, the Making Decisions-Empowerment Scale (MDE), the Sense of Community Index-2 (SCI-2), the IMR Client Self-rating (IMR), and the Rosenberg Self-Esteem Scale (RES)?
3. Is there any agency, program, or general category differences in recovery?
4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?
5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

1. Are there any gender differences that exist regarding a sense of recovery?

To answer the first research question, an independent-samples *t* test was conducted to determine gender differences on recovery measurement scores. One participant did not indicate gender. The missing value was omitted from the comparison. The results showed no significant gender differences. See Table 4.1 below. These results were insignificant with one caveat. The Levene's test on the IMR was significant. This means that equal variances were not assumed. However, the statistics for equal variances not assumed was still not significant, $t(95.9) = -.70, p = .48$.

Table 4.1

Means, Standard Deviation, and T-Test of Males and Females on Five Measures

Variables	Gender	N	Mean	Std. Dev.	Std. Error	t-test	Sig.
					Mean		
MDE	Male	55	2.43	.13025	.01756	-.465	.643
	Female	53	2.44	.12018	.01651	-.465	.643
SCI-2	Male	55	38.22	14.97614	2.01938	.673	.502
	Female	53	36.42	12.72102	1.74737	.675	.501
IMR	Male	55	53.49	10.78214	1.45386	-.697	.487
	Female	53	54.74	7.39842	1.01625	-.702	.484
RSA-R	Male	55	3.5364	1.00690	.13577	-.915	.362
	Female	53	3.7098	.96106	.13201	-.916	.362
RES	Male	55	20.3455	7.03751	.94894	1.450	.150
	Female	52	18.3846	6.94277	.96279	1.451	.150

2. How does the RSA-R correlate with the other four instruments, the Making Decisions-Empowerment Scale, the Sense of Community Index-2, the IMR Client Self-rating, and the Rosenberg Self-Esteem Scale?

To answer research question 2, Pearson-Product Moment Correlation Coefficients were conducted. Research question two involved the correlation of the RSA-R to the other four measures involved in the study: the IMR Client Self-rating, the MDE, the SCI-2, and the RES. Correlation coefficients were computed among these five recovery measures. Using the Bonferroni approach to control for Type I error across the 10 correlations, a p value of less than .005 (.05/10) was required for significance. The results of the correlational analyses presented in Table 7 show that two out of the 10 correlations were statistically significant and were greater than or equal to .31. The

correlation between the IMR and the RSA-R was significant, $r(107) = .31, p < .005$. The correlation between the IMR and the RES scale was also significant, $r(106) = .56, p < .005$. In general, the results suggest that if people have a sense of their own recovery as measured by the IMR, they have higher scores on the RSA-R and higher self-esteem scores. However, if they have a sense of their own recovery as measured by the RSA-R, they do not necessarily have higher self-esteem scores.

Table 4.2

Correlations among Five Recovery Measures

Measure	1	2	3	4	5
1. MDE	—				
2. SCI-2	.084	—			
3. IMR	-.014	.252	—		
4. RSA-R	-.031	.234	.305*	—	
5. RES	-.006	.216	.563*	.032	—

Note. MDE = Making Decisions-Empowerment Scale; SCI-2 = Sense of Community Index-2; IMR = Illness Management & Recovery Client Self-rating; RSA-R = Recovery Self Assessment-Revised; RES = Rosenberg Self-Esteem Scale

For the correlations, $n = 109$, except for the RES ($n = 108$)

*Indicates correlation is significant at the .005 level.

3. Is there any agency, program, or general category differences in recovery?

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of three recovery variables (agency, program, and general service category) on the five recovery measure scores, the MDE, the SCI-2, the IMR, the RSA-R, and the RES. Significant differences were found among the three general service categories (emotional/mental, alcohol or drugs, both) on the dependent variables as

measured by Wilkes' $\Lambda = .74$, $F(10,176) = 2.85$, $p = .003$. The multivariate η^2 indicated a large effect size, .14. Table 8 below contains the means and standard deviations for the general services categories or types.

Table 4.3

Mean and Standard Deviations on the Dependent Variables for General Services

Service Types	MDE		SCI2		IMR		RSAR		RES	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Emotional Mental	2.45	.15	36.95	14.13	53.79	7.86	3.78	.86	16.91	7.35
Alcohol/ Drugs	2.42	.11	35.25	12.47	56.48	8.00	3.44	1.10	22.39	6.04
Both	2.43	.12	41.52	16.31	49.10	12.12	3.68	.96	18.24	5.97

Note. MDE = Making Decisions-Empowerment Scale; SCI2 = Sense of Community Index-2; IMR = Illness Management & Recovery Client Self-rating; RSAR = Recovery Self Assessment-Revised; RES = Rosenberg Self-Esteem Scale

Analysis of variance (ANOVA) for the general service category (emotional/mental, alcohol or drugs, both) on the dependent variables was conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the .01 level. The ANOVA on general services category was not significant for each of the dependent variables. Still, of note was the impact of the third service category, "both emotional/mental and alcohol or drugs." This influenced the distribution regardless of agency and primary diagnosis resulting in individuals classifying themselves as emotional/mental (44), alcohol or drugs (44), or both (21).

4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of three other demographic variables (age, race, and length of services) on the five recovery measure scores, the MDE, the SCI-2, the IMR, the RSA-R, and the RES. No significant differences were found among the three demographic variables on the dependent variables. See Table 9 below for the age, race, and length of services distributions, means and standard deviations.

Table 4.4

Frequency Distributions of Age, Race, and Length of Services

Variables	<i>n</i>
Age	
<20	6
21-24	11
25-34	33
35-54	33
55-64	14
65 +	6
Race/Ethnicity	
White	83
Black/African American	10
American Indian/Alaskan	1
Asian	1
Mixed	7
Other	1
Length	
1 year	58
12 months to 2 years	12
2 years to 5 years	8
5 years +	25

*Hawaiian/Pacific Islander was omitted because no one chose this category.

5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

In order to answer research question 5, an ordered, hierarchical multiple regression was conducted with three blocks. The IMR score was the dependent variable. Block 1 used the demographic and agency/program variables – agency, program, general service categories, gender, age, race, and length of services. Block 2 entailed all the other recovery measures except the RSA-R (the MDE, SCI-2, and RES). Block 3 featured the RSA-R alone. Once again, the two predictors of the IMR were those previously cited as highly correlated with it, namely, the RSA-R and the RES.

Each B is one of the four recovery measures or agency, program, or demographic variables employed in this study. The \hat{Y} is the criterion variable of the IMR score. The multiple regression was entered in hierarchical fashion. Block one contained the agency, program and demographic information. These formed a logical block because they were not easily changed variables. Block 2 contained the other three recovery measures scores (the MDE, SCI-2, RES). These formed a natural block because they were all measures of some recovery aspect. Block 3 included the RSA-R scores alone. This block contained the primary measure of interest.

The recovery measures used in this study composed an important part of the twelve variables investigated. The recovery measures were the MDE, the IMR – Client Self-rating, the SCI-2, the Rosenberg Self-Esteem Scale, and the RSA-R. All twelve variables were used to predict the IMR score. The results were listed in the Tables 4.5 – 4.7 below. The correlations were cited first (Table 4.5). The three blocks of the ordered

multiple regression were each listed as a separate models (Table 4.6). The model summary was placed in Table 4.7.

Table 4.5

Correlations among Continuous Variables

Variables	IMR	AGE	MDE	SCI	RES	RSA
IMR	—					
Age	.092	—				
MDE	-.060	-.03	—			
SCI-2	.252	-.07	-.11	—		
RES	.550	.02	-.17	.208	—	
RSA-R	.359	-.14	.008	.237	.059	—

Table 4.6

Results of the Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 1					
Constant	60.54	4.93		12.28	.000
Agency	-.01	1.33	-.001	-.01	1.00
Program	-1.47	.90	-.26	-1.64	.11
Services	-3.52	1.45	-.29	-2.43	.02
Gender	1.07	1.85	.07	.64	.52
Age	.52	.82	.07	.64	.52
Race	.61	.67	.09	.90	.37
Length	-.10	.87	-.01	-.11	.91
Model 2					
Constant	50.18	15.17		3.31	.001
Agency	-.47	1.14	-.06	-.41	.68
Program	-.47	.78	-.08	-.60	.55
Services	-4.01	1.20	-.33	-3.34	.001**
Gender	2.54	1.51	.14	1.68	.10
Age	.34	.67	.05	.51	.61
Race	-.11	.58	-.02	-.20	.84
Length	-.18	.73	-.03	-.24	.81
MDE	-3.07	6.12	-.04	-.50	.62
SCI-2	.14	.06	.21	2.34	.02

Table 4.6 (Continued)

Results of the Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 3					
Constant	38.36	14.70		2.61	.01
Agency	-.61	1.08	-.08	-.56	.57
Program	-.36	.74	-.07	-.49	.62
Services	-3.53	1.14	-.29	-3.09	.003*
Gender	2.10	1.43	.12	1.47	.14
Age	.65	.64	.09	1.01	.31
Race	.02	.54	.002	.03	.98
Length	-.08	.69	-.01	-.12	.90
MDE	-2.29	5.78	-.03	-.40	.69
SCI-2	.09	.06	.14	1.63	.11
RES	.67	.11	.52	5.96	.000**
RSA-R	2.67	.76	.28	3.51	.001**

* $p < .005$, ** $p < .001$

Table 4.7

Model Summary of Hierarchical Multiple Regression

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate
1	.305	.093	.026	9.01557
2	.653	.426	.363	7.28763
3	.703	.495	.433	6.87843

Note. Predictors in Model 1 (Constant), Length of services, race, gender, program type, age, services category, agency

Predictors in Model 2 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RES

Predictors in Model 3 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RES, RSA-R

A multiple regression analysis was conducted to predict the overall recovery of individuals as measured by the IMR score. The first analysis consisted of variables that were not easily changed, agency, program, gender, age, general service category, race,

and length of service. The results of this analysis indicated that this block of variables did not explain a significant amount of the IMR recovery score variability.

A second analysis was conducted to evaluate whether the measurement instruments of the MDE, the SCI-2, and the RES predicted the IMR recovery score over and above the agency, program, or demographic values. This block of predictors constituted measures of recovery. The three recovery measures accounted for a significant portion of the recovery variance after controlling for the effects of agency, programs and demographics, R^2 change = .33, $F(10, 91) = 6.71, p < .001$. These results indicated that regardless of agency, program or demographics, individuals who score more highly on other recovery instruments were ostensibly recovering as measured by the IMR. Of note in this block was the RES. It was a significant predictor at the $p < .001$ level.

A third analysis was conducted to evaluate whether the RSA-R predicted recovery over and above agencies, programs, demographics, and other measures. The RSA-R was entered in the third analysis alone because it was the instrument of interest. The RSA-R accounted for a significant proportion of the recovery variance after controlling for the effects of agency, programs, demographics, and the other measures, R^2 change = .069, $F(1, 90) = 12.30, p < .005$. This result indicates that the RSA-R is a robust predictor of recovery from mental illness and substance abuse. This answers research question number five in the affirmative. The RSA-R was a reliable predictor of the IMR score for this sample.

To confirm these results, a second hierarchical multiple regression was calculated. Block one was the same and was comprised of the agency, program, gender, general

category of service, race and length of service. In block two, the RES was replaced with the RSA-R. In block three, the RES and the RSA-R were entered. See Tables 4.8 and 4.9 below for results.

Table 4.8

Results of the Second Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 1					
Constant	60.54	4.93		12.28	.000
Agency	-.01	1.33	-.001	-.01	1.00
Program	-1.47	.90	-.26	-1.64	.11
Services	-3.52	1.45	-.29	-2.43	.02
Gender	1.07	1.85	.07	.64	.52
Age	.52	.82	.07	.64	.52
Race	.61	.67	.09	.90	.37
Length	-.10	.87	-.01	-.11	.91
Model 2					
Constant	48.72	17.14		2.84	.006
Agency	-.20	1.26	-.03	-.16	.87
Program	-1.71	.83	-.31	-2.07	.04
Services	-4.06	1.34	-.33	-3.04	.003*
Gender	1.28	1.67	.07	.77	.45
Age	1.19	.74	.16	1.60	.11
Race	.97	.61	.15	1.59	.11
Length	-.67	.80	-.09	-.84	.40
MDE	-2.40	6.78	-.03	-.35	.72
SCI-2	.193	.06	.30	3.05	.003*
RSA-R	2.85	.89	.30	3.18	.002*
Model 3					
Constant	38.36	14.70		2.61	.01
Agency	-.61	1.08	-.08	-.56	.57
Program	-.36	.74	-.07	-.49	.62
Services	-3.53	1.14	-.29	-3.09	.003*
Gender	2.10	1.43	.12	1.47	.14
Age	.65	.64	.09	1.01	.31

Table 4.8 (Continued)

Results of the Second Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 3 (continued)					
Race	.02	.54	.002	.03	.98
Length	-.08	.69	-.01	-.12	.90
MDE	-2.29	5.78	-.03	-.40	.69
SCI-2	.09	.06	.14	1.63	.11
RES	.67	.11	.52	5.96	.000**
RSA-R	2.67	.76	.28	3.51	.001**

* $p < .005$, ** $p < .001$

Table 4.9

Model Summary of the Second Hierarchical Multiple Regression

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate
1	.305	.093	.026	9.01557
2	.542	.294	.216	8.08633
3	.702	.493	.432	6.88590

Note. Predictors in Model 1 (Constant), Length of services, race, gender, program type, age, services category, agency

Predictors in Model 2 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RSA-R

Predictors in Model 3 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RES, RSA-R

A follow-up multiple regression analyses was conducted to predict the overall recovery of individuals as measured by the IMR score. The first analysis again consisted of variables that were not easily changed, agency, program, gender, age, general service category, race, and length of service. The results of this follow-up analysis indicated that this block of variables once again did not explain a significant amount of the IMR recovery score variability.

A second analysis was conducted to evaluate further, whether the measurement instruments of the MDE, the SCI-2, and the RSA-R predicted the IMR recovery score over and above the agency, program, or demographic values. This block of predictors constituted measures of recovery. The three recovery measures accounted for a significant portion of the recovery variance after controlling for the effects of agency, programs and demographics, R^2 change = .20, $F(3, 91) = 8.62$, $p < .001$. These results indicate that regardless of agency, program or demographics, individuals who score more highly on the other recovery instruments were ostensibly recovering as measured by the IMR. Of note in this block were the SCI-2 and the RSA-R. The SCI-2 and the RSA-R were significant predictors at the $p < .005$ level.

A third analysis was conducted to evaluate whether the RSA-R and the RES predicted recovery over and above agencies, programs, demographics, and other measures. The RSA-R and the RES were entered in the third analysis in order to confirm that the RSA-R was a significant predictor of recovery. The RES and the RSA-R accounted for a significant proportion of the recovery variance after controlling for the effects of agency, programs, demographics, and the other measures, R^2 change = .20, $F(1, 90) = 35.49$, $p < .001$. This result confirmed that the RSA-R is a robust predictor of recovery from mental illness and substance abuse. This confirmed the answer to research question number five in the affirmative. The RSA-R was confirmed as a reliable predictor of the IMR score for this sample.

To determine further the role of the RES (self-esteem) in recovery, a third hierarchical multiple regression was conducted. The RES was the dependent variable. The first block once again consisted of the agency, programmatic and demographic

variables. Block two consisted of the recovery measures, the MDE, the SCI-2, and the RSA-R. Block three consisted of the IMR alone. The results were displayed in Tables 4.10 and 4.11.

Table 4.10

Results of the Third Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 1					
Constant	20.22	3.63		5.53	.000
Agency	.75	.98	.13	.76	.45
Program	-1.82	.66	-.42	-2.75	.01
Services	-.14	1.07	-.02	-.14	.89
Gender	-1.59	1.36	-.11	-1.17	.24
Age	.55	.60	.09	.92	.36
Race	1.25	.50	.24	2.51	.01
Length	-.45	.64	-.08	-.70	.49
Model 2					
Constant	15.41	13.56		1.14	.26
Agency	.60	1.00	1.02	.61	.55
Program	-2.01	.66	-.47	-3.06	.003*
Services	-.79	1.06	-.08	-.75	.46
Gender	-1.23	1.32	.09	-.93	.36
Age	.81	.59	.14	1.38	.17
Race	1.42	.48	.28	2.95	.004*
Length	-.87	.63	-.16	-1.38	.17
MDE	-.17	5.37	-.003	-.03	.98
SCI-2	.15	.05	.30	2.99	.004*
RSA-R	.26	.71	.04	.37	.72
Model 3					
Constant	-5.09	12.05		-.42	.61
Agency	.69	.85	.12	.81	.42
Program	-1.29	.57	-.30	-2.25	.03
Services	.92	.95	.10	.97	.33
Gender	-1.76	1.13	-.13	-1.56	.12
Age	.31	.51	.05	.61	.54
Race	1.01	.42	.20	2.43	.02
Length	-.59	.54	-.11	-1.09	.28
MDE	.84	4.57	.02	.19	.85
SCI-2	.07	.05	.14	1.53	.13
RSA-R	-.94	.64	-.13	-1.48	.14
IMR	.42	.07	.54	5.96	.000**

* $p < .005$, ** $p < .001$

Table 4.11

Model Summary of the Third Hierarchical Multiple Regression

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate
1	.422	.178	.117	6.63870
2	.511	.261	.180	6.39713
3	.686	.470	.405	5.44747

Note. Predictors in Model 1 (Constant), Length of services, race, gender, program type, age, services category, agency

Predictors in Model 2 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RSA-R

Predictors in Model 3 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RSA-R, IMR

A third hierarchical multiple regression analyses was conducted to predict the overall recovery of individuals as measured by the RES score. The first analysis again consisted of variables that were not easily changed, agency, program, gender, age, general service category, race, and length of service. The results of this analysis indicated that this block of variables did not explain a significant amount of the RES recovery score variability.

A second analysis was conducted to evaluate further, whether the measurement instruments of the MDE, the SCI-2, and the RSA-R predicted the RES recovery score over and above the agency, program, or demographic values. This block of predictors constituted measures of recovery. The three recovery measures did not account for a significant portion of the RES variance after controlling for the effects of agency, programs and demographics.

A third analysis was conducted to evaluate whether the IMR predicted the RES over and above agencies, programs, demographics, and other measures. The IMR was

entered in the third analysis in order to explain further the recovery variable relationships. The IMR accounted for a significant proportion of the RES variance after controlling for the effects of agency, programs, demographics, and the other measures, R^2 change = .21, $F(1, 90) = 35.49, p < .001$. This result confirmed that the IMR is a robust predictor of the RES score.

To determine further the role of the RSA-R in recovery, a fourth hierarchical multiple regression was conducted. The RSA-R was the dependent variable. The first block once again consisted of the agency, programmatic and demographic variables. Block two consisted of the recovery measures, the MDE, the SCI-2, and the RES. Block three consisted of the IMR alone. The results were displayed in Tables 4.12 and 4.13 below.

Table 4.12

Results of the Fourth Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 1					
Constant	4.30	.53		8.17	.000
Agency	.06	.14	.07	.39	.70
Program	-.02	.10	-.04	-.22	.83
Services	-.11	.16	-.09	-.70	.49
Gender	.11	.20	.06	.55	.58
Age	-.14	.09	-.17	-1.56	.12
Race	-.06	.07	-.08	-.81	.42
Length	.01	.09	.01	.10	.92
Model 2					
Constant	4.42	1.97		2.25	.03
Agency	.05	.15	.07	.36	.72
Program	-.04	.10	-.07	-.38	.71
Services	-.18	.16	-.14	-1.15	.25
Gender	.16	.20	.09	.83	.41
Age	-.12	.09	-.15	-1.31	.19
Race	-.05	.08	-.07	-.65	.52
Length	-.04	.09	-.05	-.38	.71

Table 4.12 (Continued)

Results of the Fourth Multiple Regression Analysis

	B	SE b	β	T	Sig.
Model 2 (continued)					
MDE	-.29	.80	-.04	-.37	.71
SCI-2	.02	.01	.25	2.19	.03
RSA-R	.01	.02	.04	.37	.72
Model 3					
Constant	2.17	1.97		1.10	.27
Agency	.07	.14	.09	.53	.60
Program	-.02	.10	-.03	-.18	.86
Services	.001	.16	.001	.005	1.00
Gender	.05	.19	.03	.26	.79
Age	-.13	.08	-.16	-1.58	.12
Race	-.04	.07	-.06	-.61	.54
Length	-.03	.09	-.04	-.31	.76
MDE	-.15	.75	-.02	-.21	.84
SCI-2	.01	.01	.15	1.42	.16
RSA-R	-.03	.02	-.19	-1.48	.14
IMR	.05	.01	.43	3.50	.001**

* $p < .005$, ** $p < .001$

Table 4.13

Model Summary of the Fourth Hierarchical Multiple Regression

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate
1	.200	.040	-.031	.96335
2	.317	.101	.002	.94780
3	.457	.209	.112	.89392

Note. Predictors in Model 1 (Constant), Length of services, race, gender, program type, age, services category, agency

Predictors in Model 2 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RES

Predictors in Model 3 (Constant), Length of services, race, gender, program type, age, services category, agency, SCI-2, MDE, RES, IMR

A fourth hierarchical multiple regression analysis was conducted to predict the overall recovery of individuals as measured by the RSA-R score. The first analysis again consisted of variables that were not easily changed, agency, program, gender, age, general service category, race, and length of service. The results of this analysis indicated that this block of variables did not explain a significant amount of the RSA-R recovery score variability.

A second analysis was conducted to evaluate further, whether the measurement instruments of the MDE, the SCI-2, and the RES predicted the RSA-R recovery score over and above the agency, program, or demographic values. This block of predictors constituted measures of recovery. The three recovery measures did not account for a significant portion of the RSA-R variance after controlling for the effects of agency, programs and demographics.

A third analysis was conducted to evaluate whether the IMR predicted the RSA-R over and above agencies, programs, demographics, and other measures. The IMR was entered in the third analysis in order to explain further the recovery variable relationships. The IMR accounted for a significant proportion of the RSA-R variance after controlling for the effects of agency, programs, demographics, and the other measures, R^2 change = .11, $F(1, 90) = 12.30$, $p = .001$. This result confirmed that the IMR is a robust predictor of the RSA-R score.

Cronbach's alpha reliabilities were calculated for the three significant measures, the IMR, the RSA-R, and the RES. The Cronbach's alpha for the IMR was .72. For the RSA-R, the Cronbach's alpha was .94. For the RES, the Cronbach's alpha was .90. For the three measures together, the Cronbach's alpha was .92. For the five measures, the

Cronbach's alpha was .84. For the entire study, all 12 variables, the Cronbach's alpha was .84.

CHAPTER FIVE

DISCUSSION

The overall purpose of this study was to investigate some of the variables inherent in recovery. Toward this end, twelve variables were investigated. Five of these variables were empowerment, sense of community, illness management, self-esteem, and self-determination. Seven variables constituted important personal and demographic factors, namely, agency, program, gender, age, general service type, race, and length of services. The five variables were measures of some aspect of recovery: The Making Decisions-Empowerment Scale - empowerment, the Sense of Community Index-2 – sense of community, the Illness Management and Recovery Client Self-rating – illness management, the Rosenberg Self-Esteem Scale – self-esteem, and the Recovery Self Assessment-Revised – self-determination. This last measure best captured the strong concern of this study – self-determination. This entire study was devoted to the person in recovery point of view. This concern was the guiding principle throughout this study and dictated data collection solely from the person in recovery.

To review, the research questions addressed in this study were:

1. Are there any gender differences that exist regarding a sense of recovery?
2. How does the Recovery Self Assessment-Revised (RSA-R) correlate with the other four measures, the Making Decisions-Empowerment Scale (MDE), the Sense of Community Index-2 (SCI-2), the IMR Client Self-rating (IMR), and the Rosenberg Self-Esteem Scale (RES)?

3. Is there any agency, program, or general category differences in recovery?
4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?
5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

We will discuss and analyze separately under each question. Implications for future research will come at the end of the chapter.

1. Are there any gender differences that exist regarding a sense of recovery?

No significant gender differences were found in the study sample. Although gender differences do exist regarding some mental disorders and substance abuse, recovery studies were not as uniform. Some found stark differences between the genders regarding substance abuse (Green, 2013). These differences included that women consumed less alcohol, used illegal drugs less often, and did not develop substance abuse problems at the same rate (Green, 2013). Some noted that differences were becoming less and less (McPherson, Carwell, & Pledger, 2004). It was long ago established that women after the age of 15 experience depression at twice the rate of men (Nolen-Hoeksema & Girgus, 1994). On the other hand, even though they might express symptoms differently, women and men had the same rate of schizophrenia (Canuso & Pandina, 2007). In this particular study, the focus was on recovery, not gender differences in diagnosis or symptomatology. Finding no gender differences pertaining to recovery had precedence, especially with the measures used in this study.

As regards the Making Decisions-Empowerment Scale (MDE), in the original study by the lead author primarily credited for the creation of the MDE, no significant

gender differences were found (Rogers, et. al., 1997). Neither were significant results for gender differences found using another of this study's measures, the Sense of Community Index, (SCI) (Stevens, Jasons, Ferrari, 2011). In a study using the IMR, researchers investigated recovery in Australia and the US. The results indicated the Illness Management and Recovery clinician and client measures (IMR) exhibited the same paucity of gender differences, "The US and Australian participants did not significantly differ on any demographic or functioning variables, including age, education, race, diagnosis, gender, or GAF..." (Mueser, Meyer, Penn, Clancy, Clancy, & Salyers, 2006). On the other hand, differences were found in responses to the Recovery Self Assessment (RSA) on the five domains. Males scored higher on all (Hanger, 2013). Similarly the state of Connecticut included many gender differences in their findings when analyzing the results of the Recovery Self Assessment (Kirk, 2008). The Rosenberg Self-Esteem Scale (RES) has demonstrated mixed results regarding gender differences depending on the study. Men reportedly scored slightly higher than females on the RES (Robins, Hardin, & Trzesniewski, 2001). However, other studies have not found gender differences with the RES (Mukolo, Heflinger, & Baxter, 2011). There were almost equal numbers of participants for both genders in this present study, (women = 53; male = 55, one person not indicating). Noteworthy was the fact that 2012 US census data for the state from which the sample was drawn indicated that women comprised 50.4% of the state population (US Census, 2012). This was close to the sample breakdown of 49% women and 51% male. Since gender differences appeared in other studies, it is valid to speculate that with a larger sample size, they might appear here, as well. On the other hand, scores might follow the MDE and IMR with gender not playing a significant role.

2. How does the RSA-R correlate with the other four measures, the Making Decisions-Empowerment Scale, the Sense of Community Index-2, the IMR Client Self-rating, and the Rosenberg Self-Esteem Scale?

There were two significant correlations in this present study, the Recovery Self Assessment-Revised with the Illness Management and Recovery Client Self-rating ($r = .31$), and the IMR with the Rosenberg Self-Esteem Scale ($r = .56$). The correlations indicated that the RSA-R explained a significant amount of the IMR variance of 10%. The RES also explained a significant amount of the IMR variance, 31%. However, this seems very high. Could the IMR and the RES possibly have too strong a relationship in this sample? This seemed counterintuitive. Another explanation was sought. To add to this explanation was the fact that the RSA-R did not significantly correlate with the RES. This means that the RSA-R explained aspects of the IMR that the RES did not. In other words, the RSA-R somehow explained the recovery of the sample unrelated specifically to self-esteem. Results suggested that self-esteem improved as recovery increased, however. This was logical given that a person experiencing a growing sense of recovery would probably feel better about self. The initial relationship of the IMR to both the RSA-R and RES as evidenced by the correlations was pictured in Figure 5.1.

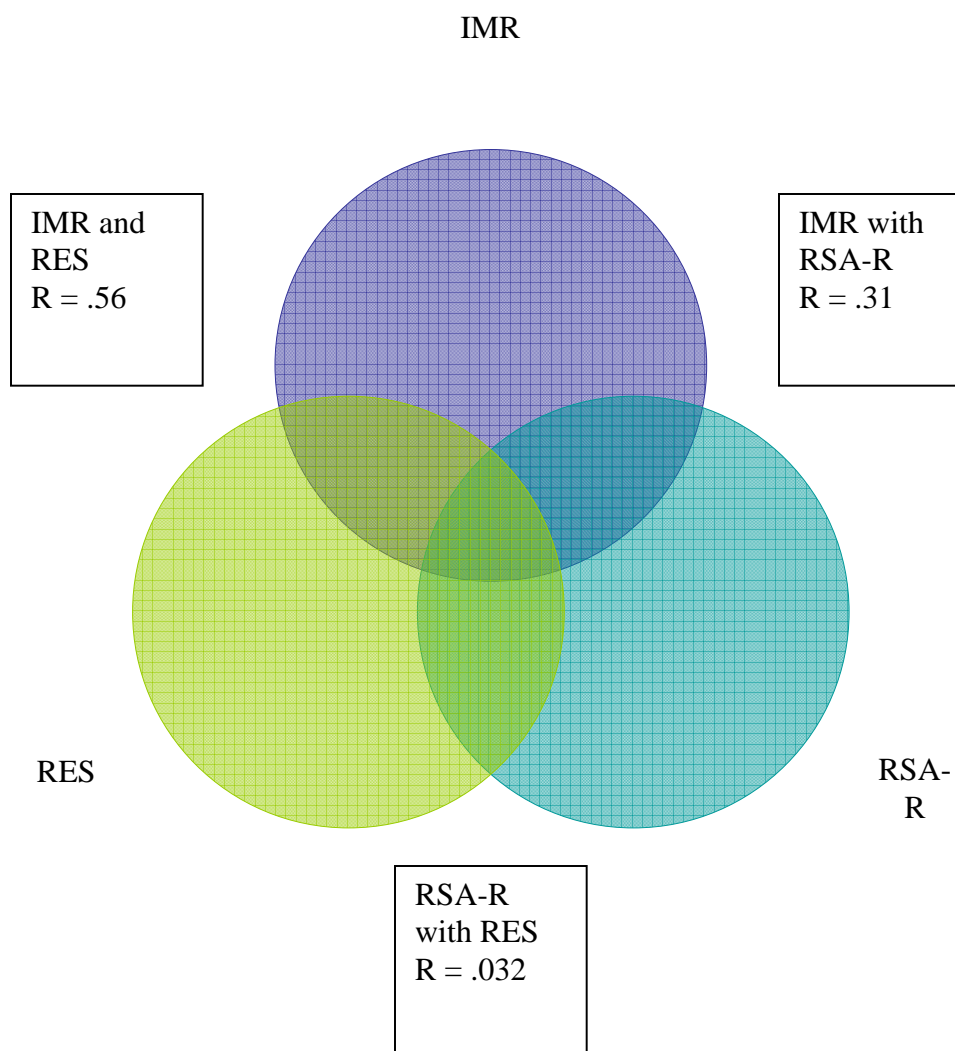


Figure 5.1. The Relationship of the Significant Variables

This result returns us to the “chicken-or-egg” argument. Was self-esteem raised because of recovery, or was recovery better facilitated by higher self-esteem?

Correlations provide no cause-and-effect explanation. Regardless of the answer, the fact remains that the three measures were involved in the recovery of the sample. The combined Cronbach’s coefficient alpha for these three measures, the IMR, the RES, and

the RSA-R, was .92. This indicates that together the three measures provided a more complete picture of recovery given that they each addressed and emphasized different facets of recovery.

For self-esteem to be an important factor in recovery outcomes was well established. It was found that self-esteem was positively and significantly related to the variables of “depression, number of symptoms, intensity of symptoms, active coping, planning, restraint, positive interpretation and growth, and use of humor” (Scheier, Carver, & Bridges, 1994, p. 1067). Self-esteem also showed negative significance with the variables “denial, mental disengagement, and behavioral disengagement” (Scheier, Carver, & Bridges, 1994, p. 1067). Using the RES, research demonstrated that race, socio-economic status and physical health affected self-esteem especially in older age (Robins, Hardin, & Trzesniewski, 2010). The RES was used to provide concurrent validity for the Recovery Assessment Scale and results satisfied this research objective (Mukolo, Heflinger, & Baxter, 2011). The IMR has also shown “convergent validity with the Rosenberg Self-Esteem Scale” (Mueser, et. al., 2006). The IMR and the RSA-R have not been included in the same analysis. Although both the IMR and the RSA-R reflected one another as demonstrated by the .31 correlation in this study, the moderate correlation signified a non-duplication of measurement.

The utility of the RSA-R was demonstrated by this present study. As noted, San Diego County in California has already begun using the IMR and the RSA in combination to measure recovery (San Diego Mental Health Services, 2013). This present study would suggest that county replace the RSA with the RSA-R to get a better diagnostic tool for their assessment of their countywide recovery system. More

importantly, this present study would suggest that the county from which the sample was drawn utilize the RSA-R also. Use of the RSA-R would provide a truer picture of the individual assessment of personal recovery and the agencies and programs in which this recovery is accomplished.

It was worth pondering again the strong correlation of the IMR with the RES in this sample. Since the $r = .56$ for this relationship, was it possibly too strong? The MDE purposely included self-esteem items in its measure (Rogers, et al., 1997). In fact, the MDE first factor was labeled self-esteem/self-efficacy (Rogers, et al., 1997). The MDE did not correlate with the RES in this study sample, especially at the significance level of the IMR with the RES. The RSA-R did not correlate significantly with the RES. An alternative theory was investigated statistically. The theory was developed that the RSA-R measured self-determination leading to recovery, and that recovery, in turn, led to greater self-determination. At the same time, higher self-esteem leads to recovery and greater recovery leads to greater self-esteem. The third and fourth multiple hierarchical regressions were employed to validate this theory. The results were that after entering the eleven-predictor variables, the IMR was the sole significant predictor of the RES and the RSA-R scores.

This essentially confirmed the new theory, namely that the RSA-R predicts recovery as measured by the IMR; self-esteem predicts recovery as measured by the IMR, and that the IMR, in turn, predicts greater self-determination and higher self-esteem. Figure 5.2 depicted this new theory.

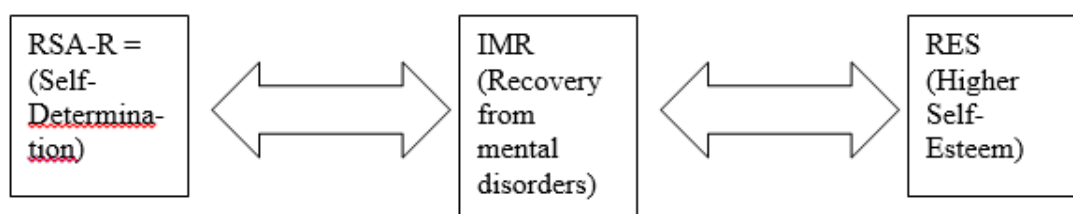


Figure 5.2. Representation of the New Theoretical Relationship of the RSA-R, the IMR, and the RES

These results confirmed that the RSA-R was a robust predictor of recovery from mental illness and substance abuse. This confirmed the answer to research question number five in the affirmative. The RSA-R was confirmed as a reliable predictor of the IMR score for this sample and IMR score predicted the RSA-R score. The RES score predicted the IMR score and the IMR predicted the RES score indicating higher self-esteem.

The RSA-R explained something the RES did not and described an additional portion of the IMR, as well. This made the RSA-R a reliable measure of recovery in this sample. There were eleven variables enlisted to predict the IMR score. The RSA-R measured self-determination and was one of the eleven variables used to predict the IMR score. Furthermore, it entailed no significant relationship with the other predictor, the RES. This resulted in the RSA-R existing as a stellar recovery measure in this sample that arguably might surpass all others in utility and accuracy. Since the RSA-R was not significantly correlated with the RES, this would suggest that the RSA-R explains the part of the IMR definition of recovery unrelated to self-esteem. This was important given that some people in recovery might experience higher self-esteem as they recover. The use of the RSA-R to measure recovery would not only be beneficial but recommended by

these results. Previous research was completed comparing the Illness Management and Recovery (IMR) scales with the Rosenberg Self-Esteem Scale (Mueser, et al., 2006).

Previous research was completed comparing the RES and recovery as measured by the Recovery Assessment Scale (RAS) (Mukolo, Heflinger, & Baxter, 2011). However, there seems a dearth of research comparing the RSA-R with the IMR or the RES.

Therefore, speculations and explanations drawn from this present sample can inform this discussion of the relationship of the three measures. The three measures proved related in a way previously not studied. The IMR relationship to the RSA-R was confirmed without self-determination directly relating to self-esteem as measured by the RES.

Returning to the topic of consequential validity (Fraenkel & Wallen, 2006) from Chapter 1, one of the other measures used in this study required addressing. That measure is the Sense of Community Index-2 (SCI-2). The SCI-2 exhibited a correlation with the IMR of .25, slightly below significance. Consequential validity, as first proposed by Messick in 1989, entails ‘value implications’ and ‘social consequences’ (Fraenkel & Wallen, 2006, p. 163). All of the agencies who volunteered for this study conducted regular group social activities with their persons in recovery. Research showed that Sense of Community was germane to the recovery for those with substance abuse issues (Stevens, Jason, Ferrari, 2011; Graham, Jason, Ferrari, 2009). The SCI-2 involved consequential validity for this study. It was not surprising that agency and program differences were not significant regarding the SCI-2 since they all conducted social integration activities. Although statistics are either significant or not, given that the SCI-2 was the next highest correlation with the IMR after the RES and RSA-R, the fact remained that the SCI-2 explained over 6% of the IMR variance.

3. Is there any agency, program, or general category differences in recovery?

No significant findings were found regarding agencies, programs, or general service categories in this study. Studies have found differences. Differences in program effectiveness were identified in county settings using the RSA (Hanger, 2013). The Connecticut study found myriad differences among agency, program, and general service categories and among their interactions (Kirk, 2008). Once again, the sample size in this current study was 109 compared to over 20,000 in Connecticut. In fact, one of the stated purposes of the RSA-R is to measure agency and program differences (O'Connell, 2005). However, many of regional and national agency and programmatic studies were conducted for internal evaluative purposes and were not made available to the public.

It was long ago recognized in counseling that, in general, no one type of therapy works best overall with psychological problems (Arkowitz & Lilienfeld, 2012; Seligman, 1995; Glasser, 1965). Rather, characteristics of the counselor are common factors across therapeutic counseling, regardless of general category (Barak & LaCrosse, 1975; Rogers, 1961). These characteristics were first initiated by humanistic psychology and are presently emphasized by the positive psychologists (Waterman, 2013). Common effective counselor characteristics, regardless of theoretical orientation, achieve effective therapy outcomes. These characteristics include “the importance of the therapists ability to provide a nonthreatening, safe, and secure atmosphere by his (sic) acceptance, nonpossessive warmth, unconditional positive regard, or love” (Traux & Carkhuff, 1976, 2008). Additional research identified the short duration of therapy while recognizing the increased benefit of increasing session attendance (Lambert & Cattani-Thompson, 2011).

It was feasible in the present study sample that common agency and program characteristics influenced the common treatment modalities for generally shared service categories. All the agencies tended to serve similar general populations. Moreover, many of the agencies, programs, and their individual staff were trained under the same countywide system. This countywide network was called the Positive Behavioral Support Network. Positive behavioral supports often is labeled as, “a strengths-based approach” (Appelstein, 2009; Pomeranz, 2009). The overall purpose is to identify strengths and accomplishments that a person might have that would help accomplish goals. This is the opposite of a barrier type of focus or approach. The county from which the sample was drawn had offered at least 32 training opportunities for county social service workers from March 2008 to May 2013. This commonality of purpose and therapeutic intent might partially explain the lack of significant differences this study found in agency, program or general service category. In addition, many workers switched employment among these agencies and programs. Persons in recovery switched, as well.

Of interest was the way the participants self-identified among the treatment choices. The question asked the reason for receiving services. The choices were emotional/mental health, alcohol or drug, or both emotional/mental and alcohol or drug. Table 3.2 showed the divisions of the sample choices. Of note in Table 3.2 were the self-designations. Thirteen participants, who were strictly in alcohol and drug treatment, self-described themselves as having both emotional/mental health and alcohol or drugs as the primary reason for their seeking services. In addition, those enrolled in integrated services, which specialized in the treatment of both, only had two self-designated as such.

This opens discussion on the possible differences between professional diagnoses and self-understanding and concept. These differences may account for the agency differences found in the county assessment from which the study sample was drawn.

Many outcomes were well measured in general fashion using the IMR. The IMR measured such factors as goal accomplishment, symptomatology, social support, structured roles, functioning, relapse, hospitalizations, medication regimen, and alcohol and drug use. These outcomes were all assessed and determined by the person in recovery who completed the measure. However, the IMR did not request a general decision on the part of the participant concerning the reason for receiving services. Neither did the IMR solicit information regarding an assessment of personal satisfaction with agency or program. This missing service evaluation was supplied by the RSA-R. This fact alone made the RSA-R a valuable contributor to the overall measure of recovery in this study. The RSA-R functioned as an establish companion to the IMR recovery assessment by exhibiting a significant statistical contribution.

4. Is there any relationship among demographic variables and recovery as measured by the MDE, the SCI-2, the IMR, the RSA-R, and the RES?

No significant relationship among age, race, or length of service was found in the study. These findings coincided with some recovery studies and not with others. The initial study conducted by the creators of the MDE found no differences due to age or ethnicity (Rogers, et. al., 1997). As noted previously, the IMR found no differences related to age or race (Mueser, et. al., 2006). However, for those whose length of services resulted in completing the IMR curriculum, overall indicators pointed to an enhanced recovery (Mueser, et. al., 2006). Race was not significant in a study using the

SCI (Graham, Jason, Ferrari, 2009). Conversely, a significant result for race and length of service involvement was found using the SCI (Stevens, Jasons, Ferrari, 2011).

Similarly, the state of Connecticut found many differences due to age, race, and length of services (Kirk, 2008). Some racial differences were delineated using the RSA in a county setting (Hanger, 2013). Studies with the RES showed no significance for age, race, or length of services (Robins et al., 2001; Mukolo, et al., 2011).

A small sample size might have played a role in determining the roles of age, race, and length of services. The age categories in this present study were normally distributed. However, the length of services categories was bimodal. The first category, less than one year, was the largest at 58. The second category, 12 months – 2 years, was 12. The third category, over 2 years, was 8. The over 5 years was 25. Thus, the first and last categories were by far the largest resulting in a skewed distribution. This may have represented two different things. Either these skewed statistics reflected the true service-length make up of the agencies and programs. Alternatively, those in agencies and programs who received services for the past 2 – 5 years may not have wished to participate in this study. Unfortunately, to answer this question total statistics from each agency and program should have been obtained but were not.

Race was skewed, as well ($n = 103$). White representation was 76%, African-American was 9%, and all others races combined was 9%. This was similar to the state population from which the sample was drawn. The statistics for the state indicated that 92.8% are white, 3.2% are Black /African American, .5% are American Indian/Alaskan, 2.0% are Asian, .1% are Native Hawaiian/Pacific Islander, and 1.6% are Mixed (US Census, 2012). Therefore, although this study included more diversity than the state

itself, its applicability to the rest of the more diverse US population is questionable as regards race.

5. Does the RSA-R predict individual recovery as measured by the IMR Client Self-rating?

A hierarchical regression was conducted to determine if the RSA-R predicted the dependent variable, the IMR score. Block one included all the demographic variables that can not be easily changed. These were agency, program, gender, general services, race, and length of services. No significant results were found. When the second block was added, which included the MDE, the SCI-2, and the RES, a significant result was found. When the third block was added, which consisted of the RSA-R alone, a significant result was also found. This resulted in the RES and the RSA-R combining as predictors of the IMR score. These results mirrored the correlation analysis. A follow-up multiple regression was calculated. The RSA-R replaced the RES in the second block. In the third block, the RES and the RSA-R were entered. The results of this follow-up multiple regression confirmed the first multiple regression. The RES and the RSA-R once again constituted the significant predictors of the IMR score.

This means that the RSA-R is a needed variance explanatory measure to understand and complement the IMR. The RSA-R explained what the RES did not. Furthermore, the RSA-R did not require a self-esteem component to accomplish this recovery prediction. This further evidenced that the RSA-R is a stand alone, legitimate measure of recovery. Thirty-five states and several countries use the RSA (Center for Adherence and Self-determination, 2013). The Veterans Administration uses the RSA to evaluate all its hospital recovery programs (O'Connell, et al, 2005). It was recommended

by SAMHSA (Campbell-Orde, et al., 2005). It was recommended for national use in Australia (Burgess, Pirkis, & Coombs, 2011). This study confirmed the utility of the RSA-R to measure recovery. With the third and fourth multiple regressions, a new theory of recovery was proffered. Self-determination predicted illness management, self-esteem predicted illness management, and illness management predicted both.

Cronbach's alpha reliabilities were calculated for the three significant measures, the IMR, the RSA-R, and the RES. The Cronbach's alpha for the IMR was .72. For the RSA-R, the Cronbach's alpha was .94. For the RES, the Cronbach's alpha was .90. These were sufficient reliabilities. Cronbach's alpha was adequate, $\alpha = .84$ for the entire study, and .84 for the five recovery measures together. The standardized Cronbach's alpha was .92 for the five measures and .91 for the entire study. This was appropriate for summed or standardized data (Cortina, 1993). These Cronbach's alpha numbers were noteworthy given the small sample size ($n = 109$). Statistically, it can be maintained that a high Cronbach's alpha could indicate a one-dimensional construct and that with a multi-dimensional construct, such as recovery, alpha levels should occupy more mid-ranges and not the sought-after .70 (Cortina, 1993). In fact, for multiple measures, the alpha for inter-item correlations is hypothesized best at .15 - .50 levels, and for broad constructs as low as .15 - .20 (Clark & Watson, 1995). The Cronbach's alpha calculated for the three significant recovery measures together was .84, indicating a positive measurement commonality of the broader recovery construct.

Limitations of the Study

The results of this study should be interpreted with caution due to several limitations of the study. First, it is important to note that self-report measures were

exclusively used in this research. This may have caused some under-reporting or social desirability effects. In particular, since the social desirability effect was not controlled, it was possible that participants may have responded to the surveys in a way that reflects this effect. In other words, they responded in the ways, they thought the research was seeking or would make their particular agency look better in the analysis.

No distinction as to diagnosis was considered. This is more of a limit on information than a flaw. The Consumer Satisfaction Survey exclusively was used to gather demographic information and it did not request such information. The age of psychiatric illness onset was not part of this study. The IMR Scale included the dynamic of medication use, although this study did not isolate it as to type or kind. All of these factors may have proven significant but found no separate inclusion in this study. In addition, participants may have fallen into more than one treatment setting, e.g., a clubhouse and residential program, or a member who has an outpatient psychiatrist/counselor at a community mental health center. For this study, the primary situation took precedence. This admittedly constituted a weighting toward the self-designation of the participant.

This study sample was thus based on volunteerism and fraught with all the statistical pitfalls and participant personal characteristics inherent therein. The lack of random assignment made this study non-experimental (Aronson, 2004, pp. 335-338). Furthermore, social desirability was not controlled for and therefore might have contributed to the need for social approval or acceptance of participants (Thorndike, Cunningham, Thorndike, & Hagen, 1991, p. 407). Still, the sample represented the general population under study, those individuals in recovery from a variety of treatment

settings. However, there was no evidence to believe that the participants of this study exhibited more response bias than any other groups in general.

The 2008 Connecticut DMHAS survey process (Kirk, 2008) found participant fatigue because of the number of surveys and/or number of items. This dynamic was considered in this study and precluded the use of certain instruments. A number of participants did complain of the time commitment involved. The estimation completion time was 30 minutes for the study. This might have produced participant fatigue and proved an undocumented limitation. Some demographic questions were omitted because of this possibility, and some valuable measures, as well.

Implications and Future Research

The study examined the factors contributing to individual's self-reported recovery. For this purpose, empowerment, sense of community, illness management, self-esteem, self-determination, agency, program, gender, age, general service category, race, and length of services were examined in relation to recovery as measured by the IMR, the RES, and RSA-R scales. The results indicated that the Illness Management and Recovery Client Self-rating, self-esteem, and self-determination demonstrated a moderate relationship. Examining all of the 12 variables, two remained to explain and predict the Illness Management and Recovery Self-rating (IMR) score: the Rosenberg Self-Esteem Scale (RES) and the Recovery Self Assessment-Revised. The IMR scale, in turn, predicted the RES and the RSA-R. The study was accomplished entirely from self-report and assessment focusing on the individual's own perspective of recovery. In terms of humanistic approaches to therapy and specifically based on self-determination theory, this was considered a strength. Asking individuals who received services about their

recovery helps them to take ownership and responsibility for their own change and recovery. Future research is recommended on a larger more diverse sample size to investigate the self-determination variable in terms of recovery, as well as its relationship of the two other significant measures, the IMR and the RES.

Identifying and measuring recovery solely based on the person in recovery might raise red flags for some researcher and professionals. Some decried the unfettered availability of health information to individuals without professional guidance (Cline & Haynes, 2001). Research demonstrated that in-hospital professionals did not welcome patient input concerning their responsibilities (McCann, Baird, Clark, & Lu, 2008). However, this person in recovery emphasis was purposeful on the part of this particular study. Empowerment for individuals in recovery resulted in positive change beyond expectations (Frese, Knight, & Saks, 2009). Inclusion in the decision-making processes of treatment encouraged recovery in healthcare situations, including psychiatry (Charles, Gafni, & When, 1997; Hamann, Leucht, & Kissling, 2003). Therapeutic change came to those who committed to accomplish it and worked towards it (Glasser, 1965). Initiating therapeutic change that puts the person in recovery in-charge of recovery might leave some outside the field, and maybe within, aghast. However, it will lead to the systemic change that many have called for and championed for years (Laing, 1960; Foucault, 1961; Szasz, 1974). Laing (1960) pointed out that mental illness was simply used to label and isolate those who make us uncomfortable. Foucault (1961) illustrated that the entire mental health system was an exercise in power and control with nefarious overtones. Szasz (1974) insisted that mental illness did not exist because its biological basis was never scientifically demonstrated. Theorists have documented the functional

nature of mental disorder. As early as 1936, Boisen's experiments supported the notion that mental disorder was a natural developmental occurrence leading for many to a better integration of personality and functioning. More recently, the identification of mental disorder as a key functional component of the world's leaders found substantiation (Ghaemi, 2011).

At the center of this study was the principle of self-determination. SAMHSA's definition of recovery included a strong endorsement of self-determination. SAMHSA defined recovery as, "A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential" (SAMHSA, 2011). The Recovery Self Assessment-Revised (RSA-R) was used as the measure of self-determination in this study. Its very items laid an implicit groundwork for self-determination. Many of the RSA-R 32 items highlighted self-determination, for example:

23. I am encouraged to help staff with the development of new groups, programs or services.

24. I am encouraged to be involved in the evaluation of this program's services and service providers.

25. I am encouraged to attend agency advisory boards and/or management meetings if I want (O'Conner, et al., 2007).

By the very promotion and endorsement of the person in recovery assessing and evaluating agency and staff, self-determination was fostered. Self-determination was an integral part of the recovery process in this present sample. Self-determination predicted illness management, and illness management predicted greater self-determination. Illness

management also predicted higher self-esteem and higher self-esteem predicted illness management. Thus, two feedback loops involving three variables were simultaneously enacted in this study. The results of this study supported the SAMHSA definition of recovery. Self-determination gave rise and fostered living “a self directed life.” In addition, self-determination was not a distant outcome but actually began during the treatment process regardless of agency or program.

The importance of self-determination was researched before this study was conducted. The importance of self-determination to recovery was identified not as “some form of rugged individualism but rather recognition of our interconnectedness and shared vulnerability” (Torney, 2004, p. 3). Self-determination emphasized important human factors, such as freedom, self-assuredness, and relational value (Mancini, 2007; 2008). Individuals do better in recovery if they make their own treatment choices and decide for themselves the future direction of their lives (Corrigan, et al., 2012). Individuals increased their skills and abilities when freedom activated their own internal motivation (Abbott, 2008). The Recovery-Oriented Practices Index (ROPI) was designed to measure self-determination as a key recovery factor (Ralph, et al, 2000). For this present study, the RSA-R person in recovery version functioned well as the measure of self-determination. This present study highlighted the need for future research on self-determination theory in recovery.

This study sought to determine if there were any agency or program differences in terms of participants’ self-reported level of recovery. Further research is needed to investigate the possible differences and similarities of individual recovery ratings. Do certain individuals experience recovery regardless of agency or program due to their own

attitudes and beliefs? This question requires further research. Self-determination theory pointed in this direction with the dismissal of adherence to expert advice and diagnosis and the emphasis on individual choice, especially regarding treatment options (Corrigan, et al., 2012).

This study only focused on recovery with limited variables. Many more variables should be taken into consideration for further research. For example, future research would investigate the role that self-perception of diagnosis plays in self-determined recovery. Again, self-determination theory pointed to this when it ascertained that motivation was fueled by independence (Abbot, 2008; Corrigan, et al., 2012). As explained earlier, many participants did not follow the categorical diagnostic designations in which professionals provided, and where they experienced, current treatment. Could the individual's self-identification of the underlying problem or issue be the one of the most important variables of self-determined recovery? This partially was examined in the technique of Motivational Interviewing (MI) (Miller & Rollnick, 2013). With motivational interviewing, the client is encouraged to identify self-perceptions, present mindset, and contemplate a future change. Motivational Interviewing is a treatment strategy especially used for the dual diagnosis and alcohol abuse. MI guides individuals through five phases of change (Miller & Rollnick, 2013). These phases begin with complete avoidance of the problem and continue through contemplating change, as well as the subsequent commitment to change and maintenance (Miller & Rollnick, 2013). MI includes many of the same counselor characteristics and techniques as emphasized by humanistic psychology, such as empathy, active listening and reflection (Rogers, 1961). In MI, clients are guided to make changes that will produce a cessation of substance

abuse, a setting of goals, and an accomplishment of those goals, all through self-perception and understanding.

Self-stigma as a self-perceptual dynamic in recovery was investigated (Corrigan, Larson, Rusch, 2009) but not to the extent of widening the choice field to include identification and endorsement of a particular categorical diagnosis. Specifically, who decides what accurate self-awareness is? If it is another, as in a professional, is this truly self-awareness and self-determination? Regardless of the arbiter, what role does self-awareness play in self-determined recovery? These are questions left unanswered at the end of this particular study. Self-perception theory (Bem, 1972) inherent in self-determination theory is applicable at this point and could be applied directly to recovery. Not surprisingly, therefore, were the three measures of recovery paramount for this study and its findings – the IMR, the RES, and the RSA-R, for they all assessed self-awareness and self-determination to a large degree. Psychology long ago deemed self-report as accurate (Stone, et al, 2000). In the mental health field, we will need to decide if we intend to follow this scientific realization or think we must to make an exception for the people with whom we work because of their diagnoses. This leads us to the enhancement and advancement of this study by future studies. All of the variables of this study require further research concerning self-perceived, self-described, and self-determined recovery. The roles and contributions of empowerment, sense of community, illness management, self-esteem, self-determination, agency, program, gender, age, general service categories, race, and length of services all warrant further scientific study. The mathematical relationship of these factors will be the first phase. The reception into agency and governmental policies and procedures will be the second phase when self-determination

becomes a reality. Finally, the third phase will involve an increase in the quality of services leading to more self-determined and healthier lives for all.

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*Appendix A**Consent to Participate in Research***Drake University Institutional Review Board Proposal for Research Using Human Subjects
IRB # 2012-13027**

Principle Investigator: Paul Knupp

Protocol Title: The psychometric properties of the recovery self-assessment: a validation study

Other Investigators: Dr. Bengu Erguner-Tekinalp

Submission date: 11/14/2012

INTRODUCTION:

If this document contains words you do not understand, please ask Paul Knupp or whoever may be designated as assistants to clarify.

The purpose of this form is to provide you with information so that you may decide whether you would like to participate in this study and to inform you of how the collected information may be used or disclosed (released to others) both during the study and after the study is completed. You will be given a copy of this consent form or make your own.

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

PI Name: Paul Knupp

Email Address: Paul.Knupp@drake.edu

Telephone number: 515-991-5760

Mailing address: Broadlawns Path 2300 Euclid Ave. Suite B, Des Moines, IA 50310

EXPLANATION OF THE STUDY:

You are invited to participate in our study concerning the measurement of recovery from mental illness.

In addition, the data generated in this study should contribute towards developing a better understanding of which agencies and their practices best promote recovery.

You will take five short questionnaires and provide demographic information regarding your age category, race, ethnicity, agency, program, services, and concerning your employment, housing, education, and hospitalizations.

The total time expected for you to complete the survey is 20-30 minutes. You may notice some questions are duplicated or are similar on the five questionnaires.

RISKS AND BENEFITS

Potential Risks and Discomforts

In answering the questions, you may have unpleasant memories. If at any time you feel you need a break or need to quit altogether, simply do so. You can withdraw without fear of any negative consequences. If later, you experience these negative reactions, please contact your agency staff and inform them as soon as possible. However, the study is not responsible for any costs incurred by individuals who go to an agency or seek follow-up help.

Potential Benefits

Your answers will be added to others from your agency for an agency composite. Consequently, no individual scores will be available. However, your answers will benefit your agency and its assessment of its own practices. In addition, your answers will help validate an important measure of recovery.

WHAT ABOUT INJURIES OR EMERGENCIES?

If you think you have been injured because of participating in this research study, you should call Paul Knupp, at (515) 991-5760 cell phone. Inform your agency. If you are unsure whether something is serious, it is always best to seek emergency help immediately by calling 911 or going to the nearest emergency room. However, the study is not responsible for any costs incurred by individuals who go to an agency or seek follow-up help.

ADDITIONAL QUESTIONS

If you have questions about this study, you can call Paul Knupp at 515-991-5760.

If you have any questions about your rights as a research participant or if you have any questions about the privacy or confidentiality of your information, you can call the Drake University Institutional Review Board at 271-DIRB (3472) or irb@drake.edu.

EXPLANATION OF ABILITY TO WITHDRAW FROM STUDY:

Your participation in this research study is voluntary. You are free to withdraw this consent and to discontinue participation in the described study at any time without prejudice.

If you are a member enrolled in an agency, you can choose to participate as a subject, if you wish. Your services from your agency are not dependent upon being a subject.

Can you see the data collected from you?

No. Your data will be indistinguishable from others in your agency. However, you may see the overall agency results if the agency so permits.

Does your authorization have an expiration date?

Your authorization to use and disclose data collected from you will expire on 12/7/2013.

REQUIRED SIGNATURE SECTION

You are not giving up any legal rights by signing this form.

I consent to participate in the research described in this form *and by signing this form*

I authorize the use and disclosure of my information as described in this form.

Name of Participant

Signature

Date

Name of Person Obtaining Consent

Signature

Date

Copy for your own records.

1/3/2013

Paul Knupp

Principle Investigator

Appendix B

MAKING DECISIONS EMPOWERMENT SCALE

Instructions: Below are several statements relating to one's perspective on life and with having to make decisions.

Please circle the number above the response that is closest to how you feel about the statement. Indicate how you feel now. First impressions are usually best. Do not spend a lot of time on any one question. Please be honest with yourself so that your answers reflect your true feelings.

Please answer all questions BY CIRCLING THE NUMBER THAT BEST DESCRIBES HOW YOU FEEL. PLEASE CIRCLE ONLY *ONE*.

1. I can pretty much determine what will happen in my life.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

2. People are only limited by what they think is possible.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

3. People have more power if they join together as a group.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

4. Getting angry about something never helps.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

5. I have a positive attitude toward myself.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

6. I am usually confident about the decisions I make.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

7. People have no right to get angry just because they don't like something.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

8. Most of the misfortunes in my life were due to bad luck.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

9. I see myself as a capable person.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

10. Making waves never gets you anywhere.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

11. People working together can have an effect on their community.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

12. I am often able to overcome barriers.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

13. I am generally optimistic about the future.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

14. When I make plans, I am almost certain to make them work.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

15. Getting angry about something is often the first step toward changing it.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

16. Usually I feel alone.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

17. Experts are in the best position to decide what people should do or learn.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

18. I am able to do things as well as most other people.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

19. I generally accomplish what I set out to do.

1	2	3	4
---	---	---	---

Strongly Agree	Agree	Disagree	Strongly Disagree
----------------	-------	----------	-------------------

20. People should try to live their lives the way they want to.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

21. You can't fight city hall.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

22. I feel powerless most of the time.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

23. When I am unsure about something, I usually go along with the rest of the group.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

24. I feel I am a person of worth, at least on an equal basis with others.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

25. People have the right to make their own decisions, even if they are bad ones.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

26. I feel I have a number of good qualities.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

27. Very often a problem can be solved by taking action.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

28. Working with others in my community can help to change things for the better.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

Appendix C

SENSE OF COMMUNITY INDEX II

The following questions about community refer to: [insert city].

How important is it to you to feel a sense of community with other community members?
(Please circle the appropriate response.)

- 1 Prefer Not to be Part of This Community
- 2 Not Important at All
- 3 Not Very Important
- 4 Somewhat Important
- 5 Important
- 6 Very Important

How well do each of the following statements represent how you feel about this community?

(Please blacken the box of the appropriate answer.)

1. I get important needs of mine met because I am part of this community.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

2. Community members and I value the same things.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

3. This community has been successful in getting the needs of its members met.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

4. Being a member of this community makes me feel good.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

5. When I have a problem, I can talk about it with members of this community.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

6. People in this community have similar needs, priorities, and goals.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

7. I can trust people in this community.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

8. I can recognize most of the members of this community.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

9. Most community members know me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

10. This community has symbols and expressions of membership such as clothes, signs, art, architecture, logos, landmarks, and flags that people can recognize.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

11. I put a lot of time and effort into being part of this community.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

12. Being a member of this community is a part of my identity.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

13. Fitting into this community is important to me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

14. This community can influence other communities.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

15. I care about what other community members think of me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

16. I have influence over what this community is like.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

17. If there is a problem in this community, members can get it solved.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

18. This community has good leaders.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not at All	Somewhat	Mostly	Completely

19. It is very important to me to be a part of this community.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Not at All Somewhat Mostly Completely

20. I am with other community members a lot and enjoy being with them.

☐ ☐ ☐ ☐

Not at All Somewhat Mostly Completely

21. I expect to be a part of this community for a long time.

☐ ☐ ☐ ☐

Not at All Somewhat Mostly Completely

22. Members of this community have shared important events together, such as holidays, celebrations, or disasters.

☐ ☐ ☐ ☐

Not at All Somewhat Mostly Completely

23. I feel hopeful about the future of this community.

☐ ☐ ☐ ☐

Not at All Somewhat Mostly Completely

24. Members of this community care about each other.

☐ ☐ ☐ ☐

Not at All Somewhat Mostly Completely

*Appendix D***Department of Mental Health and Addiction Services
DMHAS Consumer Survey FY 2008**

Agency _____

Program _____

Date Completed _____

For each box, put a mark in the circle that applies to you.

Gender

☐

Male

☐

Female

Age

☐

20 and under

☐

21-24

☐

25-34

☐

35-54

☐

55-64

☐

65 and older

Primary reason for receiving services

☐

Emotional/Mental Health

☐

Alcohol or Drugs

☐

Both Emotional/Mental Health and Alcohol or Drugs

Race

☐

White

☐

Black/ African American

☐

American Indian/Alaskan

☐

Native Hawaiian/ Pacific Islander

☐

Asian

☐

Mixed

☐

Other

Ethnicity

☐

Puerto Rican

☐

Mexican

☐

Other Hispanic or Latino

☐

Not Hispanic

Length of Service

☐

Less than 1 year

☐

12 months to 2 years

☐

More than 2 years

☐

More than 5 years

Appendix E

Illness Management and Recovery (IMR) Scales – Client Self-rating

ID Number: _____ Date: _____

Please take a few minutes to fill out this survey. We are interested in the way things are for you, so there is no right or wrong answer. If you are not sure about a question, just answer it as best as you can.

Just circle the number of the answer that fits you best.

1. Progress towards personal goals: In the past 3 months, I have come up with ...

- | | | | | |
|-------------------|---|---|---|--------------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| No personal goals | A personal goal, but have not done anything to finish my goal | A personal goal and made it a little way towards finishing it | A personal goal and have gotten pretty far in finishing my goal | A personal goal and have finished it |

2. Knowledge: How much do you feel like you know about symptoms, treatment, coping strategies (coping methods), and medication?

- | | | | | |
|---------------|----------|------|-------------|--------------|
| 1 | 2 | 3 | 4 | 5 |
| Not very much | A little | Some | Quite a bit | A great deal |

3. Involvement of family and friends in my mental health treatment: How much are family members, friends, boyfriend/girlfriend, and other people who are important to you (outside your mental health agency) involved in your mental health treatment?

- | | | | | |
|------------|--------------------------------------|--|------------------|---|
| 1 | 2 | 3 | 4 | 5 |
| Not at all | Only when there is a serious problem | Sometimes, like when things are starting to go badly | Much of the time | A lot of the time and they really help me with my mental health |

4. Contact with people outside of my family: In a normal week, how many times do you talk to someone outside of your family (like a friend, co-worker, classmate, roommate, etc.)

- | | | | | |
|--------------|----------------|----------------|----------------|----------------------|
| 1 | 2 | 3 | 4 | 5 |
| 0 times/week | 1-2 times/week | 3-4 times/week | 6-7 times/week | 8 or more times/week |

5. Time in structured roles: How much time do you spend working, volunteering, being a student, being a parent, taking care of someone else or someone else's house or apartment? That is, how much time do you spend in doing activities for or with another person that are expected of you? (This would not include self-care or personal home maintenance.)

- | | | | | |
|----------------------|----------------|-----------------|------------------|-------------------------|
| 1 | 2 | 3 | 4 | 5 |
| 2 hours or less/week | 3-5 hours/week | 6-15 hours/week | 16-30 hours/week | More than 30 hours/week |

6. Symptom distress: How much do your symptoms bother you?

- | | | | | |
|--|--|---------------------------------------|--|---|
| 1 | 2 | 3 | 4 | 5 |
| My symptoms <i>really</i> bother me <i>a lot</i> | My symptoms bother me <i>quite a bit</i> | My symptoms bother me <i>somewhat</i> | My symptoms bother me <i>very little</i> | My symptoms don't bother me <i>at all</i> |

7. Impairment of functioning: How much do your symptoms get in the way of you doing things that you would like to or need to do?

1	2	3	4	5
My symptoms <i>really</i> get in my way <i>a lot</i>	My symptoms get in my way <i>quite a bit</i>	My symptoms get in my way <i>somewhat</i>	My symptoms get in my way <i>very little</i>	My symptoms don't get in my way <i>at all</i>

8. Relapse prevention planning: Which of the following would best describe what you know and what you have done in order not to have a relapse?

1	2	3	4	5
I don't know how to prevent relapses	I know a little, but I haven't made a relapse prevention plan	I know 1 or 2 things I can do, but I don't have a written plan	I have several things that I can do, but I don't have a written plan	I have a written plan that I have shared with others

9. Relapse of symptoms: When is the last time you had a relapse of symptoms (that is, when your symptoms have gotten much worse)?

1	2	3	4	5
Within the last month	In the past 2 to 3 months	In the past 4 to 6 months	In the past 7 to 12 months	I haven't had a relapse in the past year

10. Psychiatric hospitalizations: When is the last time you have been hospitalized for mental health or substance abuse reasons?

1	2	3	4	5
Within the last month	In the past 2 to 3 months	In the past 4 to 6 months	In the past 7 to 12 months	I haven't

11. Coping: How well do you feel like you are coping with your mental or emotional illness from day to day?

1	2	3	4	5
Not well at all	Not very well	Alright	Well	Very well

12. Involvement with self-help activities: How involved are you in consumer run services, peer support groups, Alcoholics Anonymous, drop-in centers, WRAP (Wellness Recovery Action Plan), or other similar self-help programs?

1	2	3	4	5
I don't know about any self-help activities	I know about some self-help activities, but I'm not interested	I'm interested in self-help activities but I have not participated in the past year	I participate in self-help activities occasionally	I participate in self-help activities regularly

13. Using medication effectively: (Don't answer this question if your doctor has not prescribed medication for you). How often do you take your medication as prescribed?

1	2	3	4	5
Never	Occasionally	About half the time	Most of the time	Every day

14. Functioning affected by alcohol use: Drinking can interfere with functioning when it contributes to conflict in relationships, or to money, housing and legal concerns, to difficulty showing up at appointments or paying attention during them, or to increased symptoms. Over the past 3 months, how much did drinking get in the way of your functioning?

1	2	3	4	5
Alcohol use really gets in my way a lot	Alcohol use gets in my way quite a bit	Alcohol use gets in my way somewhat	Alcohol use gets in my way very little	Alcohol use is not a factor in my functioning

15. Functioning affected by drug use. Using street drugs, and misusing prescription or over-the-counter medication can interfere with functioning when it contributes to conflict in relationships, or to money, housing and legal concerns, to difficulty showing up at appointments or paying attention during them, or to increased symptoms. Over the past 3 months, how much did drug use get in the way of your functioning?

- | | | | | |
|--------------------------------------|-------------------------------------|----------------------------------|-------------------------------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Drug use really gets in my way a lot | Drug use gets in my way quite a bit | Drug use gets in my way somewhat | Drug use gets in my way very little | Drug use is not a factor in my functioning |

Appendix F
RSA-R
Person in Recovery Version

Please circle the number below which reflects how accurately the following statements describe the activities, values, policies, and practices of this program.

	1	2	3	4	5		
	Strongly Disagree					Strongly Agree	
N/A= Not Applicable D/K= Don't Know							
1. Staff welcome me and help me feel comfortable in this program.	1	2	3	4	5	N/A	D/K
2. The physical space of this program (e.g., the lobby, waiting rooms, etc.) feels inviting and dignified.	1	2	3	4	5	N/A	D/K
3. Staff encourage me to have hope and high expectations for myself and my recovery.	1	2	3	4	5	N/A	D/K
4. I can change my clinician or case manager if I want to.	1	2	3	4	5	N/A	D/K
5. I can easily access my treatment records if I want to.	1	2	3	4	5	N/A	D/K
6. Staff do not use threats, bribes, or other forms of pressure to get me to do what they want.	1	2	3	4	5	N/A	D/K
7. Staff believe that I can recover.	1	2	3	4	5	N/A	D/K
8. Staff believe that I have the ability to manage my own symptoms.	1	2	3	4	5	N/A	D/K
9. Staff believe that I can make my own life choices regarding things such as where to live, when to work, whom to be friends with, etc.	1	2	3	4	5	N/A	D/K
10. Staff listen to me and respect my decisions about my treatment and care.	1	2	3	4	5	N/A	D/K
11. Staff regularly ask me about my interests and the things I would like to do in the community.	1	2	3	4	5	N/A	D/K
12. Staff encourage me to take risks and try new things.	1	2	3	4	5	N/A	D/K
13. This program offers specific services that fit my unique culture and life experiences.	1	2	3	4	5	N/A	D/K
14. I am given opportunities to discuss my spiritual needs and interests when I wish.	1	2	3	4	5	N/A	D/K
15. I am given opportunities to discuss my sexual needs and interests when I wish.	1	2	3	4	5	N/A	D/K
16. Staff help me to develop and plan for life goals beyond managing symptoms or staying stable (e.g., employment, education, physical fitness, connecting with family and friends, hobbies).	1	2	3	4	5	N/A	D/K
17. Staff help me to find jobs.	1	2	3	4	5	N/A	D/K
18. Staff help me to get involved in non-mental health/addiction related activities, such as church groups, adult education, sports, or hobbies.	1	2	3	4	5	N/A	D/K

19. Staff help me to include people who are important to me in my recovery/treatment planning (such as family, friends, clergy, or an employer).	1	2	3	4	5	N/A	D/K
20. Staff introduce me to people in recovery who can serve as role models or mentors.	1	2	3	4	5	N/A	D/K
21. Staff offer to help me connect with self-help, peer support, or consumer advocacy groups and programs.	1	2	3	4	5	N/A	D/K
22. Staff help me to find ways to give back to my community, (i.e., volunteering, community services, neighborhood watch/cleanup).	1	2	3	4	5	N/A	D/K
23. I am encouraged to help staff with the development of new groups, programs, or services.	1	2	3	4	5	N/A	D/K
24. I am encouraged to be involved in the evaluation of this program's services and service providers.	1	2	3	4	5	N/A	D/K
25. I am encouraged to attend agency advisory boards and/or management meetings if I want.	1	2	3	4	5	N/A	D/K
26. Staff talk with me about what it would take to complete or exit this program.	1	2	3	4	5	N/A	D/K
27. Staff help me keep track of the progress I am making towards my personal goals.	1	2	3	4	5	N/A	D/K
28. Staff work hard to help me fulfill my personal goals.	1	2	3	4	5	N/A	D/K
29. I am/can be involved with staff trainings and education programs at this agency.	1	2	3	4	5	N/A	D/K
30. Staff listen, and respond, to my cultural experiences, interests, and concerns.	1	2	3	4	5	N/A	D/K
31. Staff are knowledgeable about special interest groups and activities in the community.	1	2	3	4	5	N/A	D/K
32. Agency staff are diverse in terms of culture, ethnicity, lifestyle, and interests.	1	2	3	4	5	N/A	D/K

*Appendix G***Rosenberg Self-Esteem Scale**

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.

1. On the whole, I am satisfied with myself.

SA -A -D -SD

2. At times, I think I am no good at all.

SA -A -D -SD

3. I feel that I have a number of good qualities.

SA -A -D -SD

4. I am able to do things as well as most other people.

SA -A -D -SD

5. I feel I do not have much to be proud of.

SA -A -D -SD

6. I certainly feel useless at times.

SA -A -D -SD

7. I feel that I'm a person of worth, at least on an equal plane with others.

SA -A -D -SD

8. I wish I could have more respect for myself.

SA -A -D -SD

9. All in all, I am inclined to feel that I am a failure.

SA -A -D -SD

10. I take a positive attitude toward myself.

SA -A -D -SD